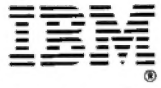




Mag Card Composer

Operating Instructions





Mag Card Composer Operating Instructions

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INTRODUCTION

The IBM Mag Card Composer is designed to make your job of typing camera ready copy easier and more productive.

Special features have been built in to this product which make initial typing easier, and enable you to make formatting changes and text revisions to your original typing without rekeyboarding the whole document.

The 8,000 character memory allows you to easily correct errors while you are typing, or after you are through and have done your proof-reading. The memory also lets you, by typing only one character, center, dot leader, or position text anywhere on a line you might want it.

A feature called scanning simplifies the jobs of creating run-arounds, and setting up columns of text.

The operating instructions will give you an opportunity to become familiar with the memory of the IBM Mag Card Composer, and use it to your advantage.

As well as the memory, the IBM Mag Card Composer uses magnetic cards to store the jobs you type. If you need a job again, simply locate the card in your file, and you can let the composer do the work of creating the document again. You no longer have to retype those projects which occur frequently.

The operating instructions will also give you some hints on filing systems for your magnetic cards, so that when you are finished with the training materials, you should have enough basic information to use the IBM Mag Card Composer in your own work.

TO THE STUDENT

Your training materials consist of two books.

The *IBM Mag Card Composer Operating Instructions* cover the basic functions. You should read the instructions and do the exercises that pertain to the type of work you do. Your IBM representative will help you specialize your training by determining with you which sections you should use.

The *IBM Mag Card Composer Reference Book* contains additional information.

The instructional material in these books describes basic procedures for using the IBM Mag Card Composer. However, the principles involved are adaptable to many different procedures.

You need the following supplies:

- Paper.
- Pencil.
- Three fonts, any type style.
 - Two red (one medium, bold, or light and one italic).
 - One yellow.
- Six magnetic cards.

FOLLOW THESE GUIDELINES

Read every page. The information is presented in small, easy steps. The instructions for you to do something are in a box, like this:

Continue reading these guidelines.

Do each exercise. Follow the directions exactly as they are given.

Review any time you wish.

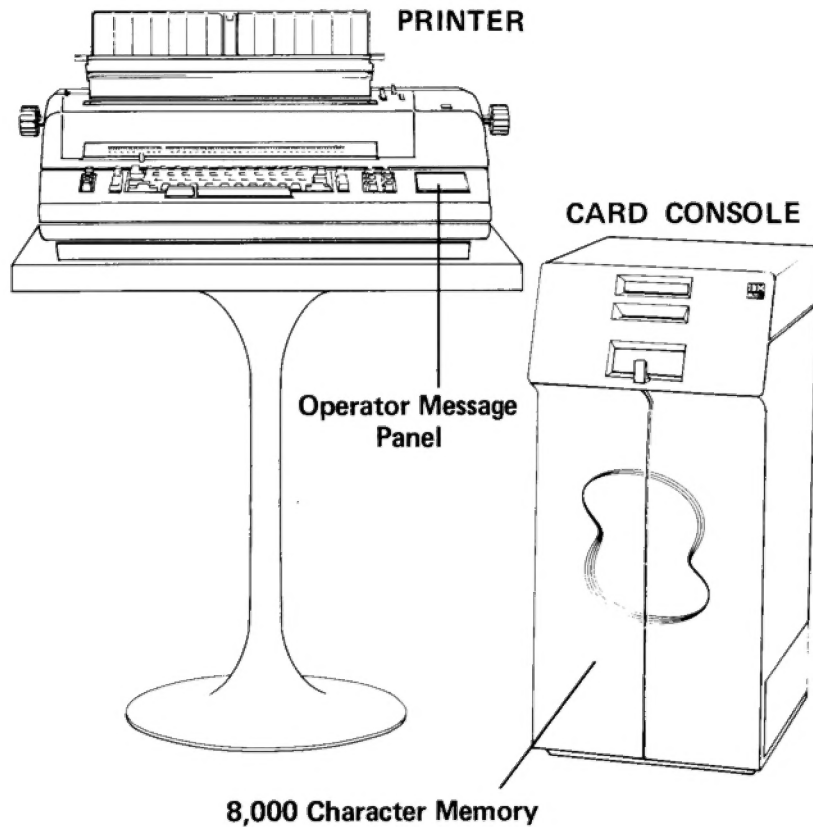
Pace yourself. Determine how quickly you can cover the material and still feel sure of it.

If you have a question,

- Use the book as a reference (the Index begins on page 205).
- Use the “What Happened?” or “Operator Message Panel” section of the *IBM Mag Card Composer Reference Book*.
- If you don’t find the answer, call your IBM representative.

BASIC INFORMATION

Your IBM Mag Card composer is made up of these two parts:



The memory stores everything you type. If you see an error or have to make a change in the page, you can move to that point and type just the change. If you have to add or take out words and sentences, the memory will make the rest of the text “float” over to allow for your changes.

The printer contains an operator message panel. It provides information about what is taking place in memory, and will help you while you learn as well as during your daily work.

The ON/OFF switch provides power to both the printer and the card console.

Turn the composer on. If it is already on, turn it off, then on again.

Operator Message Panel

The operator message panel is on the right side of the printer.

The message "Section Empty" is lighted. It will show when you turn the IBM Mag Card Composer on, or when there is nothing in memory.

If the message "End of Ribbon" appears as you type or play back text, you may be near the end of the ribbon or the ribbon cartridge may not be firmly locked into place. Page 41 in the *IBM Mag Card Composer Reference Book* gives instructions for changing the ribbon.

There are other messages on the panel, which you will see as you go through your training.

ENTRY Button

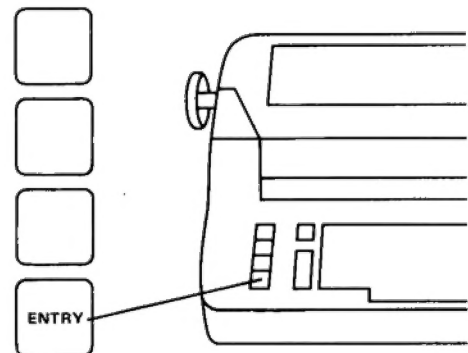
You are about to set the left margin, select a font, and insert paper for the first exercise. The ENTRY button must be up when you do these things.

- When ENTRY is down, everything you type goes into memory.
- When ENTRY is up, nothing you type goes into memory.

Depressing ENTRY latches it down.

Depressing it again releases it.

If ENTRY is down, release it.



Information on fonts, setting the left margin, and inserting paper is in the *IBM Mag Card Composer Reference Book*. If you have not used the IBM Electronic Selectric® Composer, read pages 29-42 in the *IBM Mag Card Composer Reference Book* before continuing in this book.

If you have finished reading the "General Composer Information" section in the *IBM Mag Card Composer Reference Book*, or if you have used the IBM Electronic "Selectric" Composer, do the steps in the exercise box.

1. Use a red font and red escapement.
2. Set leading 2 points higher than the font.
3. Set the left margin at "0."
4. Use the proper impression setting.

WARNING: Keep hair and personal objects (such as bracelets, ties, necklaces, etc.), out of the printing and ribbon area when the equipment is on.

In order to prevent long hair and personal articles from getting caught in the equipment, you should comply with this warning and ensure that other persons do also.

Working with Memory

Memory is a “working area” in your IBM Mag Card Composer. Everything you type is retained so that you can use it later. Typing into memory is called “entering text.”

This book will introduce you to each of the basic formats shown below:

Justify

Recently, with the advent of the space age, there have been numerous proposals made in Congress that all our measurements should be in the metric system.

Ragged Right

Recently, with the advent of the space age, there have been numerous proposals made in Congress that all our measurements should be in the metric system.

Flush Left

Recently, with the advent of the space age, there have been numerous proposals made in Congress that all our measurements should be in the metric system.

Within each of these formats you can produce copy like these examples:

Flush Right

Wallingford and Co., Inc.
1415 Neosho Street
Dearborn, Missouri

Centered

Wallingford and Co., Inc.
1415 Neosho Street
Dearborn, Missouri

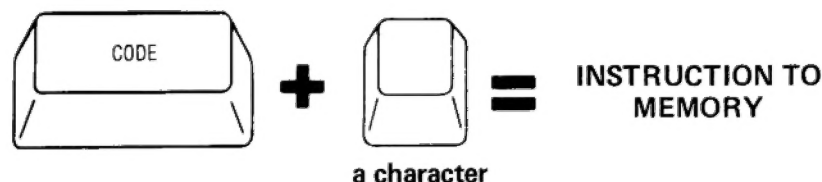
Dot Leadered

. . . Wallingford and Co., Inc.
1415 Neosho Street
. . . Dearborn, Missouri. . .

The capabilities of the memory will allow you to create many variations on these basic formats.

You will learn to use some instructions that will let you take advantage of the memory capability in your composer. These instructions, or codes, “tell” the composer what to do with your typing—all you need to do is type.

- Instructions are entered by holding down the CODE bar (on the left of the space bar) *while* typing a character.
- Use your left thumb to depress the CODE bar.



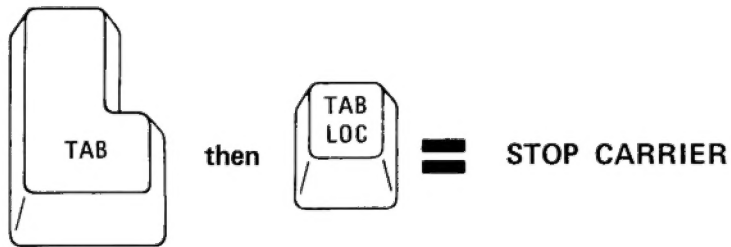
Format/Line Length Code

The first instruction you will use is called a Format/Line Length code. It determines what the format of your final copy will be, and sets the right margin (line length).

- A Format/Line Length code must be entered before you can type into memory.
- The line length can be set at any mark on the margin scale (any whole or half pica).

To enter a Format/Line Length code:

- Latch ENTRY down.
 - ENTRY must be down to type into memory.
- Hold down the CODE bar and type a format.
 - A coded “j” produces justified copy.
 - A coded “r” produces ragged right copy.
 - A coded “l” produces flush left copy.
 - The character you typed prints to the left of the margin.
- Locate the line length.
 - Depress the tab key. When the carrier nears the desired line length, depress the TAB LOC button to stop the carrier.



- If the carrier goes too far, backspace to the line length.
- If the carrier does not go far enough, space to the line length.
- After the format is entered, spacing (or typing any character) causes the carrier to move forward one-half pica. Backspacing causes the carrier to move back one-half pica.
- Carrier return.
 - The number “64” prints at the line length to show where the right margin is set.
 - The IBM Mag Card Composer can be used in many countries, to type different languages. A number has been assigned to each of the languages and special types of fonts. The number “64” means that the composer is set up for the proper spacing to type English.

1. With ENTRY down, enter a Format/Line Length code of Justify, 25 picas.
 - If you make a mistake, turn the composer off, then back on again and repeat the steps.
2. Continue reading the manual.

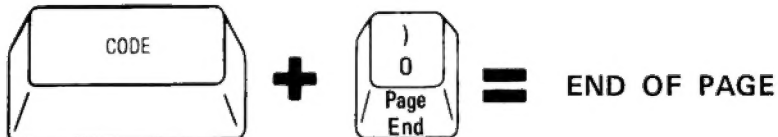
Hint: Moving the carrier by using the tab and stopping it with TAB LOC is a quick way to find your line length. You can tab/TAB LOC any time you have to move the carrier when setting up a project.

Look at the operator message panel. "Section Empty" has gone out and "Pack Feed Record" is lighted. When you learn to record on magnetic cards, you will find this message useful.

Entering Text

There are some typing procedures you should follow when entering text.

- Space only *once* after punctuation at the end of a sentence.
- Do not space after punctuation which falls at the end of a line or the end of a paragraph; also, do not space after the last word on a line.
- End the project with a Page End code (code "0").



1. Type the following exercise, beginning on the same line as the Format/Line Length code you just entered.
2. Do *not* type line for line. Type as close to the right margin as possible. The bell will ring when you are about three picas from the right margin.
3. If you make an error, or if the keyboard locks, look at the reference below the exercise.

There are three major types of American businesses. One type is called a sole proprietorship, and as its name implies, it is owned by a single person. A second type is called a partnership, and as its name implies, it is owned by two or more persons. The third type is called a corporation and it is owned by its stockholders.

CR
PE

4. End the exercise with two carrier returns and a Page End code (code "0"). The "End of Page" message comes on.
5. Continue reading the manual.

If You Make an Error

- If the error is not in the same line, ignore it. You will learn to correct it later.
- If the error is in the same line, follow these steps:
 - Backspace to the error.
 - Type the correct character.
 - Retype any other characters you backspaced over.
 - Continue typing.

If the Keyboard Locks

- The word you are typing will not fit. You may put the whole word on the next line, or you may hyphenate the word.
- To put the whole word on the next line:
 - Carrier return (this removes the partial word from memory).
 - Retype the entire word on the next line.
- To hyphenate the word:
 - Backspace to a syllable.
 - Type a hyphen.
 - Carrier return.
 - Type the remainder of the word on the next line.
 - Continue typing.

Playing Back

Final copy is produced by playing back the material in memory with the ENTRY button up. This is called “playback in final.” The material plays according to the Format/Line Length code you entered.

Use two buttons—PAGE START and AUTO when you want to play back.

- PAGE START moves you back to the beginning of the page in memory. The carrier “thumps.” If you are already at the beginning of memory, nothing happens when you depress PAGE START.
- AUTO plays back until a Page End code is reached.

Play back in final:

1. With ENTRY up, depress PAGE START.
 - “End of Page” goes out.
2. Depress AUTO.
3. Continue reading the manual.

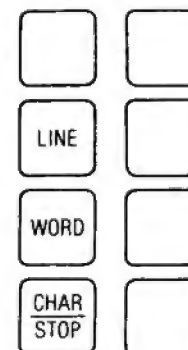
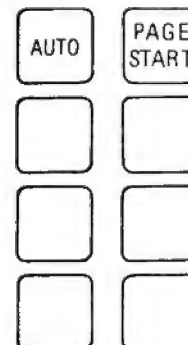
You can also play back a line, word, or character at a time.

- LINE plays back through a carrier return.
- WORD plays back through a space, tab, or carrier return.
- CHAR/STOP plays back one character at a time.

LINE, WORD, and CHAR/STOP are also used to stop playback.

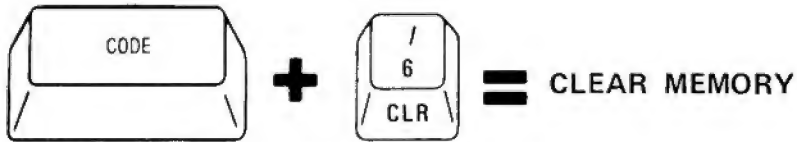
1. With ENTRY up, depress PAGE START.
2. Depress LINE and play back the first line.
3. Play back the second line, using the WORD button.
4. Depress AUTO. As the text plays back, depress CHAR/STOP.
5. Play back several characters using CHAR/STOP.
6. Continue playing back, using the LINE, WORD, and CHAR/STOP buttons.

You can play back as many times as you want, as long as the material has not been cleared from memory.



Clearing Memory

When you are through playing back, you should clear memory.



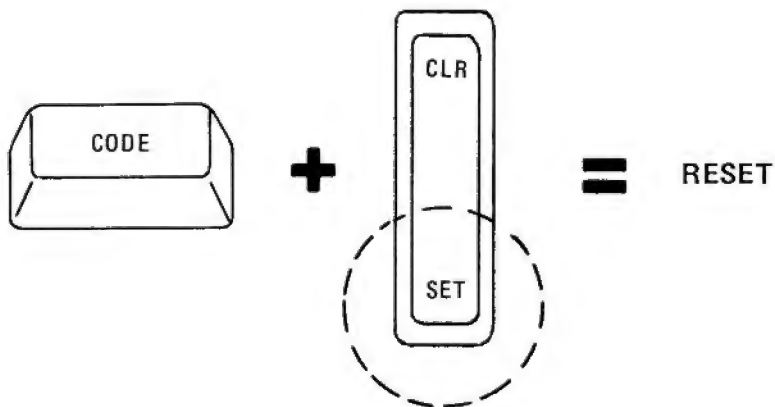
Using the following steps, clear memory.

1. With ENTRY down, depress PAGE START.
 - You must be at the beginning of memory to clear.
2. Clear memory.
 - Hold down the CODE bar and type a "6".
You will get two signals that memory has been cleared:
 - The carrier will "thump."
 - The "Section Empty" light will be on.
 - If you do not get these signals, repeat the steps.

Formatting Storage Area

The IBM Mag Card Composer has two kinds of memory—one for the text you type and one for the way the page is set up. The way the page is set up goes into a kind of memory called the Formatting Storage Area.

Clearing memory clears only the text. The Formatting Storage Area (the setup) is cleared by doing a reset.



The carrier "thumps" when you reset.

You should clear memory and reset instead of turning the composer off and on.

Reset for your next project.

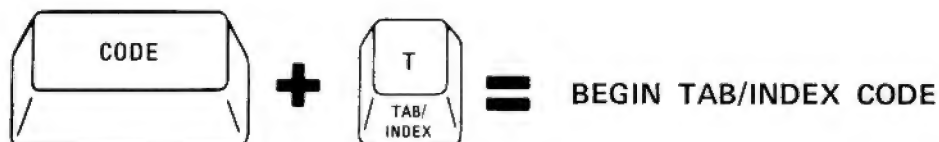
- It is very important that you reset before *every* project.

Reset is used only at the beginning of a *project*. If the project has more than one page, do not reset at the beginning of every page.

If you try to reset and the carrier does not thump, be sure that ENTRY is down and memory is clear. You cannot reset if ENTRY is up or if you have anything in memory.

Tab/Index Code

As well as “telling” the composer the format and line length of your final copy, you can also set tabs and single or double line spacing electronically. You will use the Tab/Index code for this.



After beginning the Tab/Index code, these are the things you can do:

- Specify single or double line spacing (code “i” for single or “ii” for double).
- Clear any existing tabs (depress CLR on the tab CLR/SET key and carrier return).
- Set tabs where you want them (space and depress SET).
- Correct any misplaced tabs (backspace to the incorrect tab and depress CLR).

If you enter the Tab/Index code by mistake, backspace. An “o” will print over the “T” then an “S” or “D” (single or double) and the code will be erased from memory.

⓪S or ⓪D = Tab/Index code erased

Enter the Format/Line Length and Tab/Index codes for the next exercise, following these steps:

1. Enter Justify, 20 picas. (Use a red font.)
2. Enter the Tab/Index code (code "t").
A "T" prints at the left margin.
3. Specify single line spacing (code "i").
The carrier thumps.
4. Clear any tabs that may already be set (hold the CLR end of the CLR/SET key down and carrier return). The carrier thumps.
5. Set a tab at 2 picas (space four times and depress SET).
The space bar moves one-half pica at a time when you are entering a Tab/Index code. A "t" prints where the tab was set.
6. If you set the tab in the wrong place, backspace to it and depress CLR. A "o" prints over the top of the "t" and that tab is cleared. Then space to where the tab should be and set it.
7. After you have set the tab, carrier return to end the Tab/Index code. An "S" prints to show that your copy will be single spaced.
8. Continue reading the manual.

Your copy should look like this:

jT tS

64

Type the material below. Be sure to use the number "1" key and not the lowercase "L" when typing numbers, and remember to space only once at the end of the sentence in the middle of a line.

9. Type line for line.

- End with two carrier returns and a Page End code.

jT tS 64
NOTICE TO EMPLOYEES

On December 11, the telephone switchboard will be closed at 5:15 p.m. Necessary outgoing calls may be made after 5:15 by dialing "9" and then the number.

May we have your cooperation in this matter?
Please inform the employees in your respective departments. *CR*

CR
PE

10. Play the exercise back in final (ENTRY up, page start, depress AUTO).
11. Do not clear memory yet.
12. Continue reading the manual.

You can change the setup of a project after it has been typed by changing the Tab/Index code.

To change the Tab/Index Code, delete the old one and enter a new one. The Format/Line Length and Tab/Index codes are each considered one character.

A character is deleted by:



1. Depress ENTRY and PAGE START.
2. Depress CHAR/STOP one time.
 - The Format/Line Length code plays back.
3. CHAR DEL one time.
 - This removes the entire Tab/Index code.
4. Enter a new Tab/Index code as follows:
 - Code "t".
 - Code "ii" for double spacing.
 - Depress CLR and carrier return to remove tabs.
 - Move to 2 picas and set a tab.
 - Carrier return (a "D" prints—you are in double spacing).
5. Page start and play back in final (with ENTRY up).
6. Do not clear memory yet.

Your projects must always begin with a Format/Line Length code and a Tab/Index code to be sure they will play back correctly.

If your project has no tabs, enter a Tab/Index code like this one:

- Code "t".
- Code "i" or "ii".
- Depress CLR and carrier return to clear any old tabs.
- Carrier return.

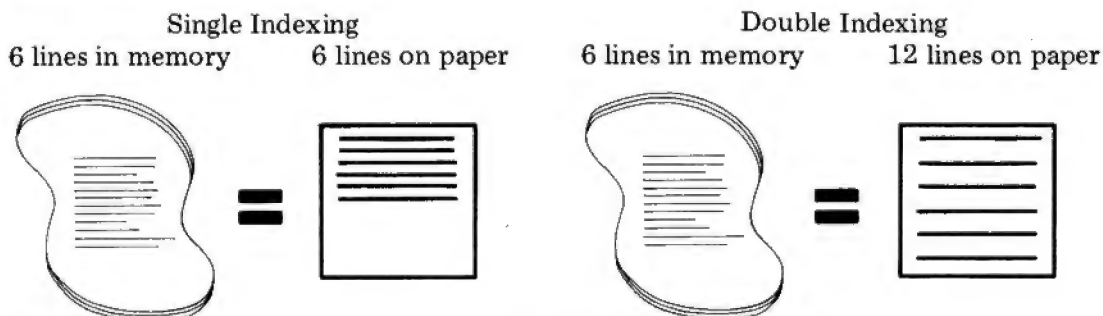
Your Tab/Index code will look like this:

TcS (single spacing) or TcD (double spacing)

The "c" means that you cleared all old tabs and did not set any new ones.

Double Indexing in Memory

In the last exercise, you typed first in single indexing, then changed to double indexing. The change to double indexing did not add extra lines in memory. It added them *only* on your paper, as shown in the illustration below.



Double indexing is simply an instruction to the printer to index the platen two times whenever a carrier return is found in memory.

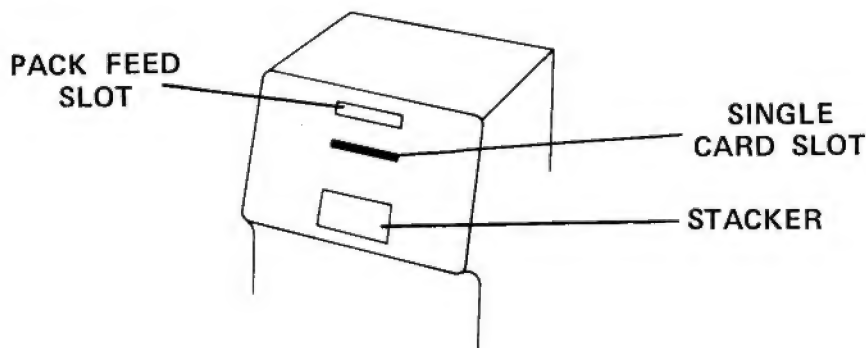
Magnetic Cards

Up to now you have been playing back the exercises from the memory. You can also store all your typing on magnetic cards for playback or changes later. Then, if work comes back for changes, you do not have to retype the whole project—only the parts that changed.

Magnetic cards are used like file folders—they hold all the information you want to store for as long as you want to store it. If you no longer need the information, you can use the cards again for another project.

Each card can hold up to 50 lines of typing.

The cards are placed in the console for recording. The card console has three openings, as shown below.



When "Pack Feed Record" is lighted on the message panel, a card from the pack feed slot will be pulled in when you depress the REC button.

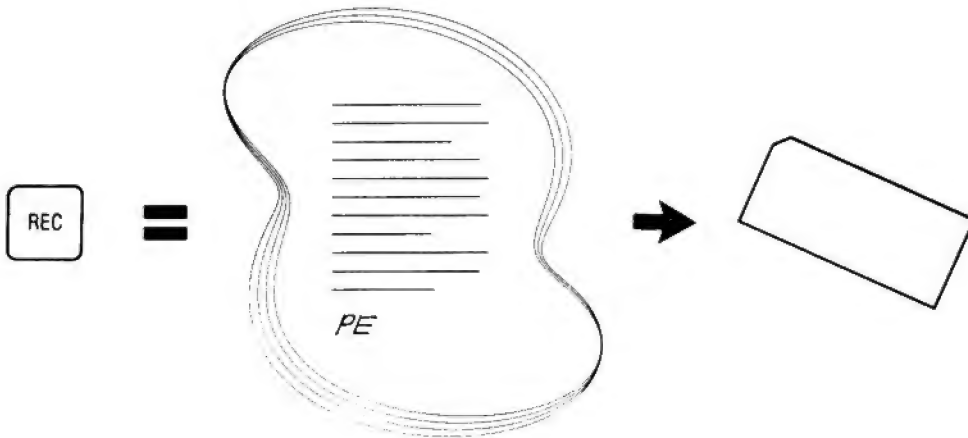
The pack feed slot can hold up to 50 magnetic cards.

Load the pack feed slot:

1. Hold a stack of cards by the numbered end with the numbers facing up.
2. Tap the unnumbered end of the stack on a flat surface.
3. Push the cards into the pack feed slot as far as they will go. The numbered end will extend out of the slot.

Recording

The text in memory is recorded onto a magnetic card by depressing the REC button.



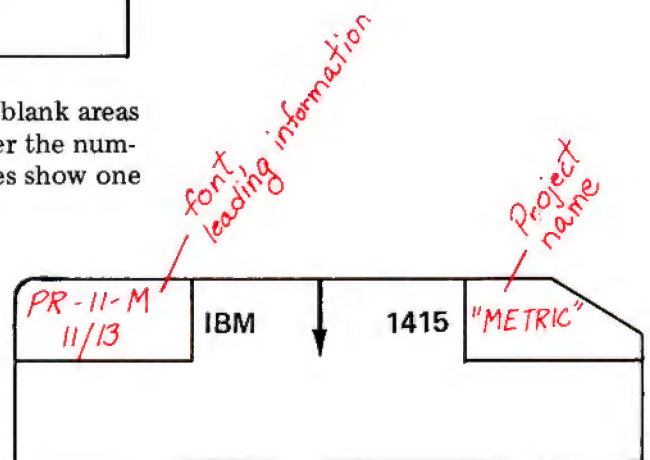
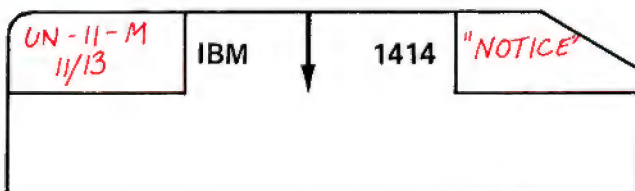
4. Depress ENTRY.
5. Depress REC and look at the message panel.

When REC is depressed, the composer:

- Shows "Recording" on the message panel.
- Takes the bottom card from the pack feed slot and draws it into the card console.
- Records the text up to the Page End code and clears the *text* in memory automatically. The Formatting Storage Area information is still there.
- Drops the recorded card into the stacker.
- Shows "Section Empty" on the message panel.

Keep this card. You will use it in another exercise later.

Notice that the IBM Writable Area Magnetic Card contains blank areas for you to write on, as well as a number. You can use either the number or the writing area to identify your cards. The examples show one way to use the writing areas.*



*Only certain types of ink are recommended for the writable area of the IBM magnetic card. See the printed card packaged with the cards for information.

Filing Magnetic Cards

When you are working with magnetic cards, you will need to set up a filing system so that you can find a card or project quickly when you want to revise it or play back a final copy. As you continue through the instructions, you will learn some ways to handle cards. These are suggested only as a basis for beginning.

Filing your cards alphabetically by job is one of the simplest filing systems.

To set up a job file, use the card box that came with your IBM Mag Card Composer.

Store the magnetic cards in card jackets (you may put up to five cards in one jacket) and write the job name on the front of the jacket.

If your jobs contain more than five cards, you may wish to use a mag card project box, which can hold up to twenty-five cards (or, use the box your magnetic cards came in) and label the front of it with the job name.

You may find that a different system will be better for your work. Your IBM representative can suggest several other methods of filing.

Review your jobs occasionally to see if any of the cards you are saving could be used again.

A card tray also came with the composer. You may want to place cards which can be used again in the card tray so they are easy to find when you want to record.

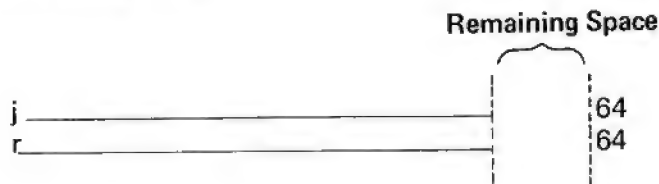
Comparison of Justify and Ragged Right Text

You have learned how to enter text in the justify format.

Text is entered for the ragged right (code "r") format in the same way.

The difference in the two formats is the way the lines are adjusted, or expanded, in final playback.

The space between the last word you type on the line and the line length is called "remaining space."



In justify (j), all of the remaining space is divided between the words when playing back in final. The spaces between the words are expanded until the last word is even with the line length.

In ragged right (r), half of the remaining space is divided between the words; the other half appears at the right of the text. Therefore, the copy prints closer to the right margin than it did as you were typing it, but it is not justified.

Because the remaining space is spread across the final playback lines, the closer you type to the margin in entry, the better, or tighter, your final copy will look.

The only lines that are not expanded are those lines that end paragraphs. However, even the last line of a paragraph will expand if it ends after the bell rings.

To Begin a Project:

- ENTRY down.
- Reset (code SET).
- Enter a Format/Line Length code.
- Enter a Tab/Index code.

To Reset:

- ENTRY down.
- Memory must be clear.
- Depress code SET.
- The carrier thumps.

To Enter a Format/Line Length Code:

- ENTRY down.
- Code “j”, “r” or “l”.
- Depress tab, and stop the carrier with TAB LOC when you are close to the line length. If necessary, space or backspace to reach the desired line length.
- Carrier return. The number “64” prints.

To Enter a Tab/Index Code with Tabs:

- Code “t”.
- Code “i” for single spacing or code “ii” for double spacing.
- Depress CLR and carrier return.
- Space to the tab location.
- Depress SET.
- Carrier return.

To Enter a Tab/Index Code with No Tabs:

- Code “t”.
- Code “i” or “ii”.
- Depress CLR and carrier return.
- Carrier return.

Mistake in the Tab/Index Code:

- If you enter the Tab/Index code by mistake, or if you make an error while typing it, backspace until you reach the margin. $\overline{\text{TS}}$ or $\overline{\text{TD}}$ will print. The Tab/Index code will be erased.

To Change the Tab/Index Code after you have Typed the Project:

- Page start.
- Play one character (the Format/Line Length code).
- Character delete to remove the Tab/Index code (code CHAR/STOP).
- Enter the new Tab/Index code.

SUMMARY

When Entering Text:

- Type as close to the line length as possible.
- If a word will not fit, the keyboard will lock.
 - Carrier return and retype the whole word on the next line, or
 - Backspace to a syllable, type a hyphen, carrier return, continue.
- Space one time after ending punctuation.
- Do not space after a sentence that ends a line or a paragraph, or after the last word on a line.
- Use the number "1" not the lowercase "L" for numbers.

To Play Back Text in Final:

- ENTRY up.
- Page start.
- Depress AUTO, LINE, WORD, or CHAR/STOP.

To Clear Memory:

- ENTRY down.
- Page start.
- Code "6".

To Clear Formatting Storage Area:

- Memory must be clear.
- ENTRY down.
- Reset (code SET).

To Record:

- Cards in pack feed slot, "Pack Feed Record" message light on.
- ENTRY down.
- Depress REC.

SUMMARY

Making Corrections

You have been backspacing and retyping to correct typing errors on the same line.

Sometimes you may not notice an error until you start typing the next line. You cannot backspace over a carrier return; but there is a way to back up to correct this kind of error.

Line Return

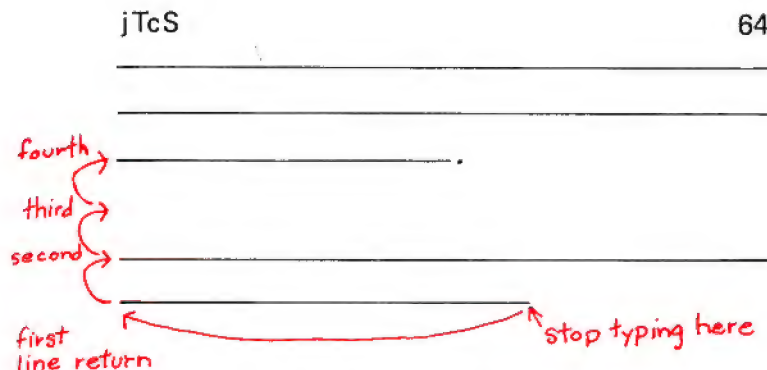
The LINE RET (Line Return) button moves you backward in memory. It *does not* erase.

If you are not at the left margin, it moves you in memory to the beginning of the line on which you are typing. It also moves the carrier to the left margin.

If you have just carrier returned and have not yet typed a character, it moves you up to the beginning of the line above in memory. The carrier does not move.

Each time you depress the button after that, you move up a line in memory and the carrier stays at the left margin.

An extra carrier return between paragraphs or lines is also considered a line.



The Format/Line Length code and Tab/Index code are each one character. If you line return to the first line, you will be at the Format/Line Length code. To reach the first text character, depress CHAR/STOP two times—once to play back the Format/Line Length code and once to play back the Tab/Index code.

LINE RET can be used only when ENTRY is down.

The exercise that follows will give you practice in using LINE RET and in making various kinds of corrections

The example below shows the entire paragraph you will be typing. The exercise, however, is broken down into several steps so that you only type a portion of it at a time.

From the earliest days of our history as a nation, many proposals have been made that all our measurements should be made in the metric system. In 1866, the metric system was made legal in the United States, but not mandatory. In recent times there has been a greater awareness of the importance of science and technology.

Type only as far as the instructions in the box indicate. *After* you have made all your corrections, your text will be the same as the example.

1. Exercise setup:

- Reset.
- Use a red front with two points of leading (11/13 or 12/14).
- Be sure there is a card in the pack feed slot.
- Enter Justify, 24 picas.
- Enter the Tab/Index code following these steps:
 - Code "t".
 - Code "i" for single spacing.
 - Depress CLR and carrier return to clear any old tabs.
 - Space to 3 picas and depress SET to set the tab.
 - Carrier return.

2. Enter the following text *line for line*.

3. Make the error shown and type as far as the ↓.

From hte earliest days of our history as a nation, many pro ↓

- 4. Depress LINE RET two times.
- 5. Continue reading the manual.

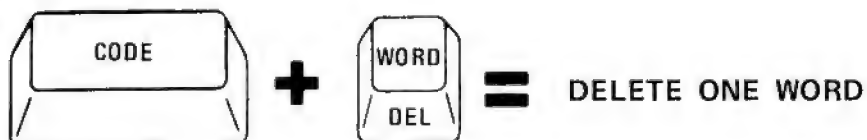
The rest of this section will give you the steps for making a correction in *any* situation. The instructions in the boxes will give you steps for the corrections in *this* exercise.

When you have reached the line you want, play back to the error.

6. Depress CHAR/STOP once to play back the Format/Line Length code.
7. Depress CHAR/STOP again to play back the Tab/Index code.
8. Depress WORD.
 - The tab plays back.
9. Depress WORD again.
 - The word "From" and the space following it play back.
10. Continue reading the manual.

Next, the error has to be corrected.

Word Delete



WORD DEL (Word Delete) deletes the word and the space, carrier return, or tab that follows it. It also deletes a space, carrier return, or tab that stands by itself.

- ✓ 11. Delete the word "hte" by holding down the CODE bar and depressing WORD once.
12. Continue reading the manual.

The next step is to type the correct word. Remember that the space, carrier return, or tab that follows it must also be typed.

13. Type in the word "the" and then space.
14. Continue reading the manual.

When you depress AUTO, playback continues to the point where you stopped typing. You can then continue entering the project into memory.

15. Depress AUTO.
16. When playback stops, continue entering the text
line for line to the ↓.

~~many~~ proposals have been made that our measurements should be mad ↓

17. Continue reading the manual.

To add a word, line return to the line where you want to add the word. Play back to the point where the word is to be added. Enter the word and space once.

- The text you had already entered “floats” down in the memory and does not need to be reentered.

18. Line return twice.
19. Play back through “that”.
20. Enter the word “all” and then space.

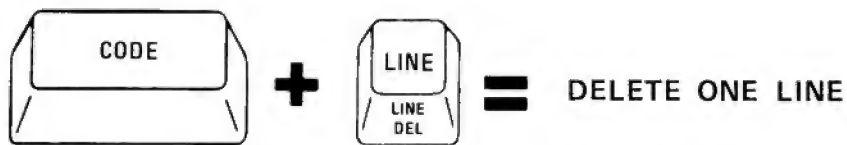
many proposals have been made that ^{all}our measurements should be mad

21. Depress AUTO.
22. When playback stops, continue entering the text below *line for line*. Type the extra carrier return where it is indicated. Type to the ↓ and stop.
23. Remember to use the number “1” when typing numbers.

^{extra →}
_{CR} ~~should be~~ made in the metric system. In 1866
the metric system w ↓

24. Continue reading.

Line Delete



When you have to delete a whole line or the last part of a line, use LINE DEL (Line Delete).

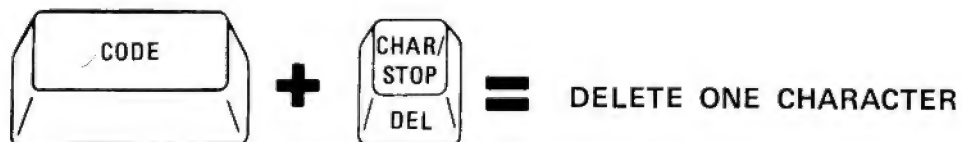
- LINE DEL deletes a line of text and the carrier return that follows it.
- A single carrier return is also a line. Use LINE DEL to delete an extra carrier return.

25. Line return twice to get to the extra carrier return.
26. Delete the extra carrier return.
27. Depress AUTO.
28. When playback stops, continue entering the text
line for line to the ↓.

system was made legal in the U.S. but not
mandatory. In ↓

29. Continue reading.

Character Delete



When you have to delete one character, use CHAR DEL (Character Delete). This deletes one character, space, punctuation mark, or code from memory.

Hyphenations

Corrections may make lines shorter or longer than they were the first time you typed them.

Playing back from the point of correction with the ENTRY button down automatically changes the line endings. The words are moved up or down to fit the line length entered at the beginning of the project.

While this is happening, sometimes only part of a word will fit on the new line, and you will make a hyphenation decision.

- The composer will print as much of the word as will fit, and then print an em dash (“—”).
- The carrier backs up to the beginning of the word and stops.

30. Line return once and make the correction shown.

- Remember a “word” is a word and the space after it. Therefore “U.S., ” is deleted by one word delete.
- Type in “United States,” and then space.

system was made legal in the ~~U.S.~~^{United States} but not mandatory. In ↓

31. Depress AUTO.

32. The word “mandatory” will print out “mandator—”.

33. Continue reading.

You have a choice of hyphenating the word, or putting the whole word on the next line.

To Hyphenate the Word:

- Play back to the end of a syllable using CHAR/STOP.
- Type a hyphen.
- Depress AUTO and the rest of the word prints on the next line.

To Put all of the Word on the Next Line:

- Depress AUTO. The carrier returns and prints the word on the next line.

34. Hyphenate “mandatory” at “manda”.
 - If you make a mistake, look at the procedures below the exercise.
35. When playback stops, enter the remaining text *line for line*.
 - Correct any errors you make using the methods you have learned.

tory. In recent times there has been a greater awareness of the importance of science and technology. *CR*

CR
PE

36. Depress REC. “Recording” is on until the exercise is recorded.
37. “Section Empty” should be showing.
38. Keep the card for the next exercise. You have completed this exercise.

Mistakes in Hyphenations:

- Played back too many characters.
 - Depress AUTO. The carrier backs up to the beginning of the word and you can start again.
- Typed an incorrect character (for example, an “=” or a “0” instead of the hyphen, or too many hyphens).
 - Backspace to remove it.
 - Enter the hyphen and *carrier return*.
 - Depress AUTO.
 - If you do not carrier return, the carrier will back up to the beginning of the word when you depress AUTO.

Using all the Characters that Print:

When part of a word prints for a hyphenation decision, you may want to place the hyphen after the last character that printed. If the keyboard locks when you try to enter the hyphen, there was not enough space for it. If that happens, you must either break the word at a different syllable or drop the entire word to the next line.

Reading and Playback

You have now learned to type, make corrections, and record text. In this exercise you will play back both cards you have recorded.

1. Remove any cards from the pack feed slot.
2. Insert the two cards you have recorded into the pack feed slot. Place the first exercise card on the bottom.
3. With ENTRY down, reset.
4. Release ENTRY.
5. Depress READ.
 - The bottom card is pulled into the console.
 - "Reading" is displayed on the message panel.
 - When reading is complete, the card drops into the stacker.
6. Depress AUTO.
7. Continue reading the manual while the exercise plays back.

Reading text into memory does not change your card in any way. The card in the stacker is in the same condition it was when you recorded it.

Remember, the tabs and line spacing were not the same for both exercises. Because you used the Tab/Index code to set your tabs and line spacing, you did not have to remember how the exercises were typed to have your copy play back correctly.

8. Depress PAGE START.
9. Depress ENTRY.
10. Clear memory.
 - If you do not see "Section Empty" repeat these steps.
11. Reset.
12. Release ENTRY.
13. Read the next card.
14. Play back using AUTO.
15. When playback stops, clear memory.
16. You may reuse these cards.

The two cards you just played back had different Format/Line Length codes, tabs set in different places, and different line spacing. The Format/Line Length code and Tab/Index code are recorded on the card along with the text.

To Make Corrections on a Previous Line:

- ENTRY down.
- Line return to the line that is not correct.
- Play back to the point of change.
- Delete the error, if there is one.
- Type in the correction or addition. (Remember to enter the space or carrier return that should follow the word.)
- Depress AUTO to play back other text in memory.
Make hyphenation decisions where required.
- Continue entering text.

Playing Back in Entry:

- ENTRY is down.
- Changes line endings after corrections are made.
- Stops for a hyphenation decision if a word will not fit.

Hyphenation Decisions in Entry Playback:

- To hyphenate the word:
 - Play back to the point where you can divide the word.
 - Type a hyphen.
 - Depress AUTO.
- To put the whole word on the next line:
 - Depress AUTO.

If You Make an Error While Hyphenating:

- Backspace to remove the error.
- Type the hyphen.
- Carrier return.
- Depress AUTO.

To Read:

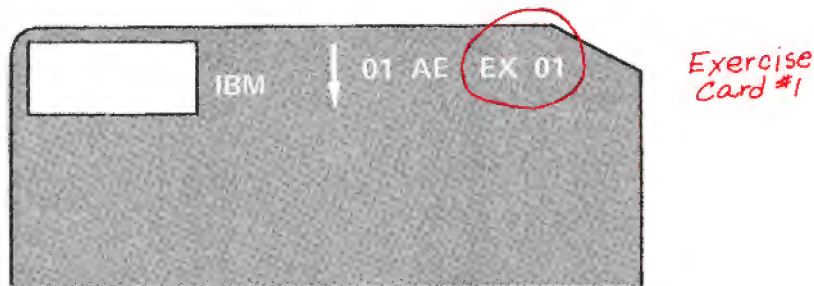
- Cards in pack feed slot.
- Reset.
- For final playback, ENTRY up.
- Depress READ.
- After playing back, clear memory.

Card Duplication

There will be times when you have to make a duplicate of a magnetic card.

In the back pocket of this book you will find a set of magnetic cards which have exercises already recorded on them. You will be duplicating these cards as you need them. Then, as you do the exercises, you will use the duplicates and the prerecorded cards can remain with the book for future training needs.

The exercise cards look like this:



Follow these steps to duplicate a card:

1. Depress ENTRY, clear memory, and reset.
2. Place cards you can record on in the pack feed slot (for this exercise you need one card).
3. Insert the prerecorded exercise card in the single card slot (for this exercise, use card 1).
 - "Reading" will be lighted on the message panel.
 - "Remove Card" and "Pack Feed Record" will come on when reading is completed.
4. Put the prerecorded card back in its folder.
5. Depress REC.

When you record with ENTRY down, memory is cleared. The instructions you just followed were for making one copy of the card.

If you have to make more than one copy, record with ENTRY up. When ENTRY is up, memory is not cleared by recording, and just as when playing back in final, you may make as many copies as you like. Be sure to clear memory after recording with ENTRY up.

In the next exercise you will use the card you just duplicated.

Revisions

Sometimes you may have to make changes or corrections after a whole project has been typed and recorded.

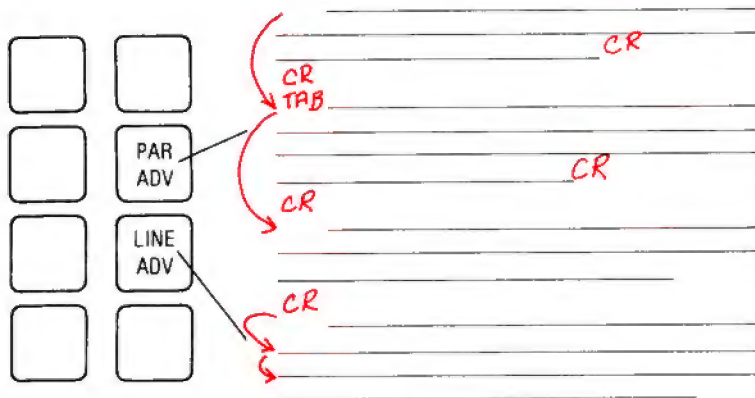
You have learned how to make corrections as you enter text. You know how to move back in memory using LINE RET and PAGE START. You can also move forward in memory without playing back.

Paragraph Advance and Line Advance

PAR ADV (Paragraph Advance) takes you to the beginning of the next paragraph.

- A paragraph is identified by two or more carrier returns, or a carrier return followed by a tab.

LINE ADV (Line Advance) moves you to the beginning of the next line.



Both PAR ADV and LINE ADV can be used only when ENTRY is down.

The next exercise will give you practice using these buttons.

The example below shows the text on the card you duplicated. In this exercise you will use it to practice using PAR ADV and LINE ADV. In the next exercise you will make the revisions that are marked.

jTcS

64

This report contains only the condensed status reports from departments that concern your area:

Our Budget Department is compiling figures for the last quarter. Projections for materials, labor, and overhead are vague at this time. Complete figures will be available December 31.

Expansion of marketing emphasis in the West has put great strains on the Sales Department. A marketing study is in process to seek more effective sales techniques.

Activity in the Mail Department has increased 30 percent in the first six months of this year. Greater utilization by Sales is given as the reason. More efficient equipment, to meet the work load, is on order.

The above information is for your use only and is not to be used outside your department. Further details and a total report from all departments can be obtained in the President's office.

1. Remove any cards in the pack feed slot.
2. Place the card you duplicated in the pack feed slot.
3. Depress ENTRY and reset.
4. Depress READ.
 - "Card Inside" will be displayed when reading stops.
5. Depress PAR ADV one time, and then depress WORD.
 - The word "Our" should play back.
6. Depress PAR ADV two times, and then depress WORD.
 - The word "Activity" should play back.
7. Depress LINE ADV once, and then depress WORD.
 - The word "the" should play back.
8. Depress LINE ADV twice, and then depress WORD.
 - The word "work" should play back.
9. Page start and continue reading the manual.

Combining and Separating Paragraphs

Proofreading may require corrections like those you have already made (adding words, correcting misspellings, etc.) or it may require more extensive formatting changes, like combining and separating paragraphs.

In the next exercise the following changes will be made:

- The paragraph identification is being changed from two carrier returns to two carrier returns and a tab.
- The second and third paragraphs are being combined into one.
- The last paragraph is being split into two.

The steps to follow are listed below.

“Card Inside” is still on.

10. Depress CHAR/STOP one time to play back the Format/Line Length code.
11. CHAR DEL to remove the old Tab/Index code.
12. Enter a new Tab/Index code.
(Single spacing, clear old tabs, set a new tab at 3 picas, carrier return.)
13. Tab.
 - If you want to check that you are in the right place, play back one word (“This”).
14. PAR ADV once and tab.
 - Play back the word “Our” to check your position.
15. LINE ADV three times. (You are at the extra carrier return. Do not play it back.)
16. LINE DEL.
17. PAR ADV and tab.
 - The word “Activity” should play back if you check your position.
18. PAR ADV and tab.
 - The word “The” should play back if you check your position.
19. LINE ADV one time.
20. Play by word through “department.”
21. Carrier return two times and tab.
22. Continue reading the manual.

These steps are a summary of how to combine and separate paragraphs.

To Combined Paragraphs:

- LINE ADV to the last line of the first paragraph to be combined.
- Depress LINE to play back the line and one carrier return.
- Delete the paragraph identification.
 - If paragraphs are separated by two carrier returns, LINE DEL the second carrier return.
 - If paragraphs are separated by a carrier return and a tab, WORD DEL to delete the tab.
 - If paragraphs are separated by two carrier returns and a tab, LINE DEL to delete the second carrier return and WORD DEL to delete the tab.

To Separate Paragraphs:

- LINE ADV to the line where the new paragraph begins.
- Using WORD, play back through the end of the sentence just before the new paragraph.
- Enter the paragraph identification used in the rest of your project.
 - (Two carrier returns, a carrier return and a tab, or two carrier returns and a tab.)

If the new paragraph beginning is already at the beginning of a line, merely add the extra carrier return or tab before it.

Scanning

When you made corrections while entering text, you played back with ENTRY down to adjust for the additions or deletions. Since the changes you have just made to the exercise changed the lengths of the lines, this exercise also needs to be adjusted.

The IBM Mag Card Composer has another way to adjust text that is faster than entry playback. It is called scan. As well as being fast, there are other ways in which you will find scan helpful as you go through the training.

When the composer is scanning, it looks through the text in memory and arranges it so that as many words as possible will fit on the line. It follows the same rules as entry playback but, since it does not have to print, it is faster.

You remember that in entry playback there were times when a word would not fit on a line, and you made a hyphenation decision. Scanning does the same thing, but your copy will look a little different.

When the composer is scanning and finds a word that will not fit, it prints a message like this:

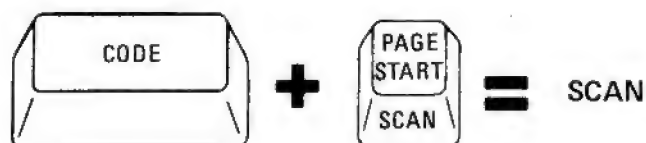
06 mandator—y

This tells you that on line 6 all of the word “mandatory” will not fit on one line. The character “y” exceeds the line length. You then have the same choices and follow the same steps as you did when making a hyphenation decision earlier.

As a review:

- To place the whole word on the next line, depress AUTO.
- To hyphenate the word, play by character to the syllable, enter a hyphen and then depress AUTO.
- If you play back too far, depress AUTO and start again.
- If you type an incorrect character, backspace to remove it, type the correct character, carrier return and depress AUTO.

Scan is started by holding down the CODE bar and depressing PAGE START. (ENTRY must be down when you scan.)



While the composer is scanning, the “Scan” message is on solid. When you have to make a hyphenation decision, the “Scan” message blinks until you make the decision and continue scanning.

While it is scanning it is also counting lines. When it has scanned your page it will tell you how many lines it found. It can count up to 99 lines at one time.

When all your text has been scanned, the “Scan” message will go out.

The following contains the steps to scan the exercise you have just corrected.

1. Page start.
2. Enter scan (code PAGE START).
 - The message "Scan" is on blinking.
 - A "c—" prints. It is asking how many lines you wish to scan.
3. Type "99" for the line count.
4. Carrier return, and scanning continues.
 - Scanning stops after the Format/Line Length code. Depress AUTO. Depressing AUTO causes scanning to continue.
 - Scanning stops again after the Tab/Index code. Depress AUTO to continue.
 - Scanning is interrupted on line 6. The "Scan" message is blinking. The word "Decemb—er" has printed.
5. Using the same procedure as before, hyphenate the word after "Decem—".
 - Depress AUTO after typing the hyphen to continue scanning.
 - The next hyphenation decision is on line 12. "Scan" is blinking and "utilizatio—n" has printed.
6. Hyphenate after "utiliza—", and depress AUTO to continue.
7. The next hyphenation decision is on line 19, "department—s". Hyphenate it after "depart—" and depress AUTO.
 - The line "20 ments can be obtained in the President's office". prints.
 - This is called a reference line. It is the last line of text in memory.
 - The characters "21
22—" also print. After the last text line there were two carrier returns.
 - The "—" after "22" shows that it is the end of memory. There is nothing on line 22.
8. Scanning is complete. Depress REC.
9. Play back the exercise in final.
 - Reminder: Reset.
Release ENTRY.
Read the card.
When reading is complete, depress AUTO.
After playback, clear memory.
You may reuse this card.

SUMMARY

Card Duplication—One Copy:

- Cards for recording in pack feed slot.
- ENTRY down.
- Reset.
- Insert prerecorded card in single card slot.
- Remove prerecorded card and depress REC.

Card Duplication—Two or More Copies:

- Cards for recording in pack feed slot.
- Reset.
- ENTRY up.
- Insert prerecorded card in single card slot.
- Remove prerecorded card and depress REC.
- Depress REC for as many copies as you need.
- Clear memory.

Corrections in Previously Recorded Material:

- ENTRY down.
- Reset.
- Cards to be revised in pack feed slot.
- Depress READ. (The card stays inside.)
- Make the corrections.
- Scan.
- Depress REC.

Scanning:

- Enter scan (code PAGE START).
- Enter a line count from 1 to 99 and carrier return.
- Scanning stops when line count or the end of memory is reached, and prints a reference line.
- Depress REC.

Format/Line Length and Tab/Index Codes in Scanning:

- The code will print and "Scan" will be on blinking.
- To remove the Format/Line Length code, backspace once.
- To remove the Tab/Index code:
 - When scanning stops after the Format/Line Length code, CHAR DEL once.
 - Enter the new Tab/Index code.
- To keep the code as it is, depress AUTO.

SUMMARY

SUMMARY

To Combine Paragraphs:

- LINE ADV to the last line of the paragraph. Depress LINE to play back the line and the carrier return.
- Delete the second carrier return and/or the tab at the beginning of the following paragraph.
- Scan after the last revision on the page.

To Separate Paragraphs:

- LINE ADV to the line where the new paragraph begins.
- Play back by word through the end of the sentence just before the new paragraph.
- Enter the paragraph identification used in the rest of the project.
- Scan after the last revision on the page.

SUMMARY

You know now that scanning may change line endings after you have made corrections. The following two things could happen when scanning (or playing back with ENTRY down).

- Words which should remain together on one line (names, dates, abbreviations) may be separated after scanning.
- A hyphen that divides a word at the end of a line is dropped if the word is within the line after scanning.

Space-3

like this

Washington D.C.
Jane Smith

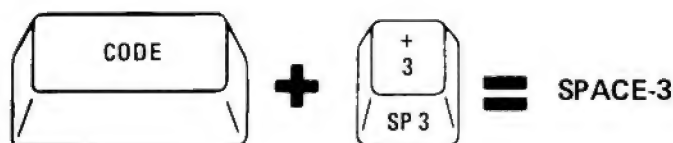
not this

D.C.
Smith

Washington
Jane

To be sure that words which should be together stay on one line, enter a Space-3 (code "3") between the words instead of a regular space. This "joins" the words with three units of space.

A Space-3 will not have extra units added to it when the line is being justified—it will always be three units.



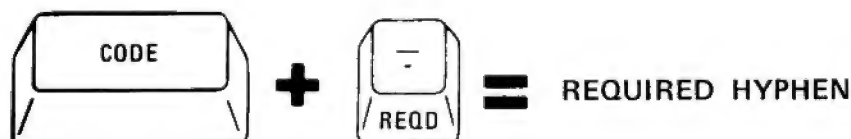
Required Hyphen

Some hyphens are a permanent part of the word and must print regardless of where they are in the line.

For example:

rate first-
time-consuming

Enter a Required Hyphen (code "-") to prevent these required hyphens from being dropped.



1. Exercise setup:
 - Use a red font.
 - Reset.
 - Enter Justify, 34 picas.
 - Enter a Tab/Index code for single spacing, tab at 2 picas.
2. Enter the following *line for line* with Required Hyphens and Space-3 codes where marked.
3. Remember to space once after periods within a line for tight copy.
4. Remember to use the number "1", not the lowercase "L", when typing numbers.

jT tS

64

It is inevitable that public spirited politicians face each other many times throughout their careers. Few present day confrontations gain the historical recognition of the Lincoln Douglas debates.

Beginning on August 21, 1858, Abraham Lincoln and Stephen A. Douglas met nine times in public debates. These debates were held prior to the senatorial election of 1859 in which Douglas defeated Lincoln. This initial defeat did not stop the politically minded Lincoln. In the presidential election of 1860, the Lincoln Hamlin ticket defeated three others, including Stephen A. Douglas.

5. Play in final.
6. Clear memory.

Words that contain Space-3 or Required Hyphens need to be handled differently when making hyphenation decisions.

Words with Space-3:

- If none of the words can be hyphenated, depress AUTO to put all the words on the next line and to continue scanning.
- If one of the words can be hyphenated, follow the regular procedure.

Words with Required Hyphen:

- If the characters that print include a Required Hyphen, play back through the hyphen and depress AUTO. (Do not enter another hyphen.)
- If the characters that print do not include a Required Hyphen, depress AUTO to put all of the word on the next line and continue scanning.

Words Containing Complete or Partial Ellipsis (word . . . word):

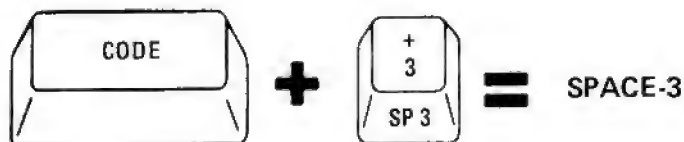
- Whenever possible, words containing an ellipsis should stay on the same line. If you have to divide them, follow these steps.
- If the characters that print contain the complete ellipsis:
 - Play back through the last *period* in the ellipsis (*not* the last space).
 - WORD DEL to remove the space.
 - Carrier return and depress AUTO.
- If some characters and only a part of the ellipsis print:
 - Play back through the word before the first period (use CHAR/STOP and do not play back the first space in the ellipsis).
 - WORD DEL to remove the space.
 - Carrier return and depress AUTO.

Exact Spacing Codes

When you have to position the carrier at an exact location that is not on a pica or half pica, use Exact Spacing codes.

Space-3

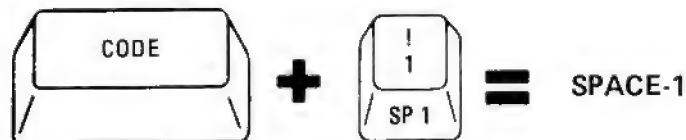
The Space-3 (code “3”) spaces the carrier forward three units as the regular space bar does, but it will not expand on playback.



WORD playback will stop after the Space-3.
WORD DEL stops after the Space-3.

Space-1

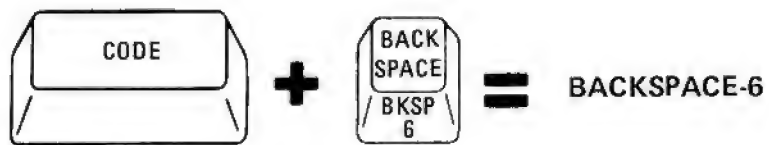
The Space-1 (code “1”) moves the carrier forward one unit at a time and does not expand.



WORD playback will not stop after the Space-1.
WORD DEL will not stop after the Space-1.

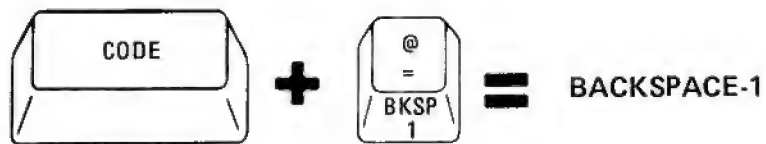
Backspace-6

The Backspace-6 (code "Backspace") backs up the carrier six units at a time. It does not erase material from memory as the regular backspace does.



Backspace-1

The Backspace-1 (code "=") backs up the carrier one unit at a time. It also does not erase material from memory.



The Backspace-6 and Backspace-1 are not word endings, either for playback or deleting.

Space-3:

- Used instead of a regular space between words that should always be on the same line.

Required Hyphen:

- Used instead of a regular hyphen when the hyphen is always part of the word.

Hyphenation Decisions, Words with Space-3:

- If none of the words can be hyphenated, depress AUTO.
- If one of the words can be hyphenated, follow the regular procedure.
- If the characters that print include a complete ellipsis; play back through the last period, WORD DEL, carrier return and depress AUTO.
- If the characters do not include all the ellipsis; play back using CHAR/STOP through the last letter of the word before the ellipsis, delete the first Space-3, carrier return, and depress AUTO.

Hyphenation Decisions, Words with Required Hyphens:

- Play back through the Required Hyphen and depress AUTO.
- If the Required Hyphen was not included in the characters that printed before the em dash, depress AUTO.

Exact Spacing Codes:

- Space-3 always moves forward three units.
- Space-1 always moves forward one unit.
- Backspace-6 always moves back six units.
- Backspace-1 always moves back one unit.

“Batching” Work

When you are doing several short jobs, you will find that it is faster to do all the rough draft typing first, and then all of the final playback. Doing all of one kind of a job at once is called “batching.”

This section consists of short exercises, and will give you an opportunity to batch recording and playback.

If this were real work, it would mean that you could use rough draft paper for all the typing, and then switch to your final copy paper for all the playback, rather than switching from one to the other for each short job.

To prepare for the next section, do the following:

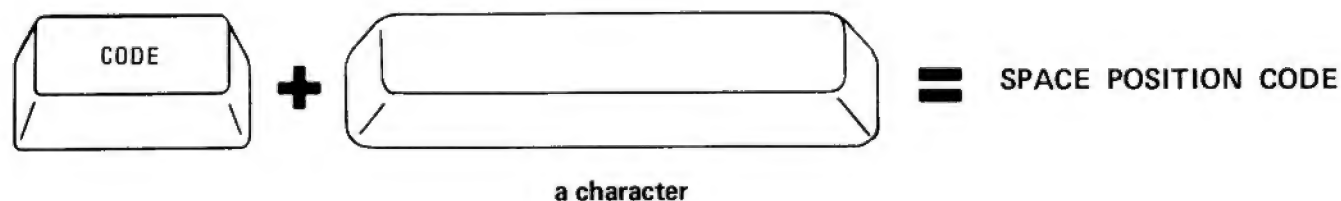
1. Place six blank cards in the pack feed slot.
2. Remove any cards which may be in the stacker.

Positioning Text on the Line

The instructions you will learn in this section will let you position text wherever you want it on the line—even with the left margin, even with the right margin, or centered.

The first instruction is called a Space Position code.

- The Space Position code is entered by holding down the CODE bar while depressing the space bar.
- The Space Position code prints as a “;”.



Text at the Left Margin

As you know, when you enter text to be justified or ragged right, extra units are added to the spaces to “push” the words out to the line length. There will be times that you are entering short lines or lists and will not want the words to be “pushed” to the line length.

In the example, the lines marked with “*” are the ones which should stay at the left margin.

* Basic Formats

The format must be followed by a line length

* to form the Format/Line Length Code.

The Basic Formats used on the IBM Mag Card

* Composer are as follows:

* Ragged Right

* Flush Left

Justify

To keep words from being “pushed” to the line length, enter a Space Position code after the last word on the line.

If the Space Position code is not entered after the lines in these cases, the final copy will look like this:

Basic	Formats	Short heading followed by only 1 carrier return.
The format must be followed by a line length		
to form the Format/Line Length Code.		Line ended after bell. Too much space between words.
The Basic Formats used on the IBM Mag Card		Last line of paragraph, followed by only one carrier return.
Composer	are as follows:	Short lines followed by only 1 carrier return.
Ragged	Right	
Flush	Left	
Justify		

This example shows what your entry copy will look like when typed properly.

Entry copy

jTcS 64
 Basic Formats;
 The format must be followed by a line length to form the Format/Line Length Code.;

The Basic Formats used on the IBM Mag Card Composer are as follows.;

Ragged Right;
 Flush Left;
 Justify 2CR
 PE

Final copy

Basic Formats
 The format must be followed by a line length to form the Format/Line Length Code.

The Basic Formats used on the IBM Mag Card Composer are as follows:
 Ragged Right
 Flush Left
 Justify

1. Exercise setup:
 - Use any red font.
 - Reset.
 - Enter Justify, 18 picas.
 - Enter a Tab/Index code for single spacing, no tabs.
2. Enter the entry copy of the example, line for line. Enter Space Position codes where they are marked. End with two carrier returns and a Page End code.
3. Depress REC.

Text at the Right Margin

To position text at the right margin, enter a Space Position code *before* the line.

Entry copy

rTcS 64
 ;Wallingford and Co., Inc.
 ;1415 Neosho Street
 ;Dearborn, Missouri 2CR
 PE

Final copy

Wallingford and Co., Inc.
 1415 Neosho Street
 Dearborn, Missouri

The term for text that is even on the right and uneven on the left is "flush right."

1. Exercise setup:
 - Use any red font.
 - Reset.
 - Enter Ragged Right, 16 picas.
 - Enter a Tab/Index code for single spacing, no tabs.
2. Enter the entry copy of the example, line for line.
3. Depress REC.

Text that is Centered

To center text, enter a Space Position code on *both sides* of the line.

Entry copy

jTcS

ⓐProduct Education Developmentⓐ
ⓐInternational Business Machines Corporationⓐ
ⓐSharmark Placeⓐ
ⓐAustin, Texasⓐ 2 CR
PE

Final copy

Product Education Development
International Business Machines Corporation
Sharmark Place
Austin, Texas

64

1. Exercise setup:
 - Use any red font.
 - Reset.
 - Enter Justify, 19 picas.
 - Enter a Tab/Index code for single spacing, no tabs.
2. Enter the entry copy of the example.
3. Depress REC.

Flush Left and Flush Right Text

To produce text that is even at both the left and right margins, with space in between, enter a Space Position code *between* the parts of the line.

Entry copy

rTcS

Press RomanⓐTraditional
Aldine RomanⓐOld Style
UniversⓐSans Serif 2CR
PE

64

Final copy

Press Roman
Aldine Roman
Univers

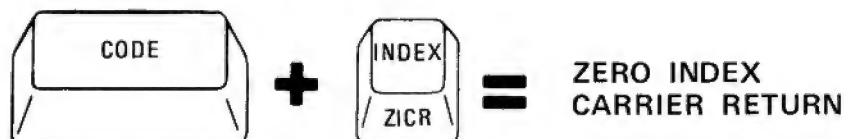
Traditional
Old Style
Sans Serif

1. Exercise setup:
 - Use any red font.
 - Reset.
 - Enter Ragged Right, 16 picas.
 - Enter a Tab/Index code for single spacing, no tabs.
2. Enter the text from the example.
3. Depress REC.

Text Centered Between Flush Left and Flush Right Material

You have learned to use the Space Position code to produce centered text, and text that is flush left and flush right.

The Zero Index Carrier Return (code Index) will let you combine flush left, centered and flush right text all on the same printed line.



Example:

Left	center	right
Left side	in the middle section	end

You actually enter the text as two lines, but it prints as one. That is because the Zero Index Carrier Return returns the carrier to the left margin, but does not space up, or index the paper.

The procedure for entering the text is:

- Enter the text on the left, a Space Position code, and then the text on the right.
 - Enter a Zero Index Carrier Return.
 - Roll up the paper.
- Hint:** Since the paper did not space up when you used the Zero Index, you would be typing over the first line. Roll the paper up so you will not miss typing mistakes.
- Enter the material to be centered (;center;).
 - Carrier return.
 - Repeat these steps for each line.

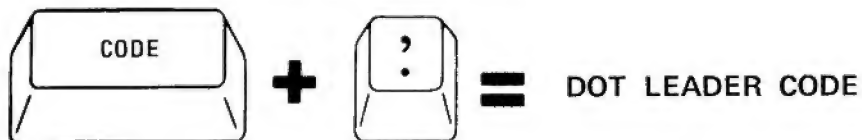
1. Exercise setup:
 - Use any red font.
 - Reset.
 - Enter Ragged Right, 32 picas.
 - Enter a Tab/Index code for double spacing, no tabs.
2. Enter the exercise below.
 - End with two carrier returns and a Page End code.

SUNDAY	June 17, 1978	9:30—11:30
PRELUDE	Peace Be With You	Edmundson
CHORAL INTROIT:	Create In Me A Clean Heart	Mueller

2 CR
PE

3. Depress REC.

The next instruction is a Dot Leader code.



The Dot Leader code (code “.”) is a variation of the Space Position code.

Enter the Dot Leader code instead of a Space Position code when you want to fill the space with dots.*

A Dot Leader code prints as “.”.

Entry copy

jTcS
 Ragged Right
 Wallingford and Co., Inc.
 Product Education Development
 Press Roman Traditional

64

Final copy

Ragged Right.
 Wallingford and Co., Inc.
 . . . Product Education Development . . .
 Press Roman Traditional

1. Exercise setup:
 - Use any red font.
 - Reset.
 - Enter Justify, 16 picas.
 - Enter a Tab/Index code for single spacing, no tabs.
2. Enter the text in the example. Type Dot Leader codes where they are marked.
3. Depress REC.

*There is an exception to this rule. In the exercise on page 46 which combined flush left, flush right, and centered material on one line with Zero Index Carrier Returns, using a Dot Leader code would result in dots typed over all the text.

You now have six cards in the stacker. The first exercise you typed is on the bottom, and the last one is on the top.

Follow these steps to batch playback:

1. Place the six cards in the pack feed slot.
2. Insert a clean sheet of paper.
3. Reset.
4. ENTRY up.
5. Depress READ.
6. Play back the first project.
7. Clear memory.
8. Reset, read, play back and clear memory for each of the projects.
9. Save the card with the dot leaders for another exercise. It is the top card in the stacker.

If your playback does not match the examples given with the exercises, go back and review the steps for that exercise.

SUMMARY

Space Position Code:

- Positions text on a single line.

To Produce Flush Left Text:

- Enter a Space Position code at the end of the line.

To Produce Centered Text:

- Enter a Space Position code before and after the text.

To Produce Flush Right Text:

- Enter a Space Position code, and then the text.

To Combine Flush Left and Flush Right on the Same Line:

- Type flush left text, a Space Position code, then flush right text.

To Combine Flush Left, Flush Right, and Centered Text on One Line:

- Type as if to combine flush left and flush right.
- Do not carrier return; code the index (Zero Index) instead.
- Roll up the paper manually.
- Type the material to be centered, using the centering procedure.
- Carrier return.

Dot Leader Code:

- Used instead of a Space Position code when the space is to be filled with dots.
- Cannot be used to combine flush left, flush right, and centered text on the same line.

SUMMARY

Font Code Numbers

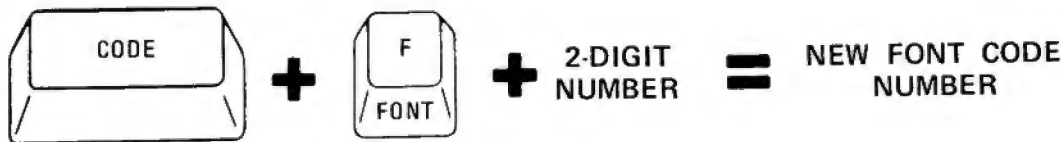
Each language and special application font has an identification number. This number prints on your paper when you enter a line length.

Your home language Font Code Number is always in memory. Sixty-four (64) is the number for the U.S. text fonts. Any time you turn the power off or reset, the home language Font Code Number is reset in memory.

A list of Font Code Numbers and the appropriate Keyboard Reference Charts can be found in the *IBM Mag Card Composer Reference Book*.

To enter a different Font Code Number:

- With ENTRY down, depress the CODE bar and type an "f".
- Type the appropriate Font Code Number.



- The carrier thumps when you code "f" and type each number.
- Nothing prints when you enter the Font Code Number.
- "Font Change" blinks as you enter the Font Code Number. Once you begin to type or play back in the different number, "Font Change" is on solid.

1. Enter Justify, 20 picas.
 2. Carrier return.
 3. Enter Font Code Number 99.
 - "Font Change" blinks when you code the "f" and comes on solid when you type the "99".
 4. Enter Ragged Right, 20 picas.
 - "Font Change" is on solid.
 - The number "99" should print at the line length.
 5. Clear memory.
 - You will not type an exercise with this Font Code Number.
- Reset.
- You are back to "64" now.

To play back material with different Font Code Numbers:

- Playback will stop automatically at a Font Code Number.
“Font Change” will blink.
- Change to the appropriate font and continue playback.
“Font Change” will be on solid until you return to the home language.
- You do not have to enter the Font Code Number again—it is “remembered” and recorded on the card.

Note: A different Font Code Number can be coded with ENTRY up. However, it will not be recorded with text, and will not stop playback of text.

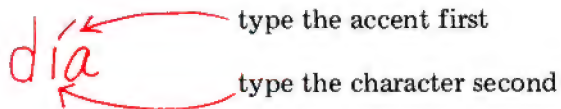
Typing with Foreign Language Fonts

Some languages use accent marks or other characters that must print directly over or under certain letters.

When you enter a Font Code Number for a language that uses these characters, those key positions become non escaping or “dead” keys.

To type with non escaping keys:

- Type the non escaping character first.
The carrier does not move.
- Type the character requiring the accent.
The carrier escapes normally.



type the accent first

type the character second

When typing a foreign language, use the same rules for entering text that you have learned.

The coded keys (such as Space Position, Page End, Space-3, etc.) are in the same places as on regular U.S. keyboards.

The *IBM Mag Card Composer Reference Book* contains Keyboard Reference Charts for the foreign languages. Any blank key on the charts indicates that the character in that position is the same as on a U.S. text font.

On Brazilian, Latin, French, and Portuguese fonts, the uppercase “1” is an undotted “i” to be used when the “i” must be accented.

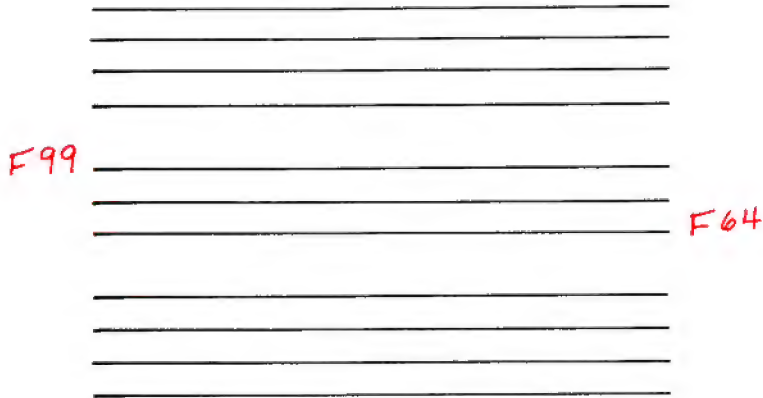
Reserved Font Code Numbers

In addition to the Font Code Numbers assigned to specialized fonts and foreign language fonts, the IBM Mag Card Composer has Reserved Font Code Numbers for you to assign for your own work.

The Reserved Font Code Numbers are 90 through 99.

If you have a job that contains italics, another type style, another type weight, and so on, assign one of these numbers to the portion of the job that is different from the rest of the job.

In the example below, the middle paragraph should be in italics.



Entering one of the Reserved Font Code Numbers at the beginning of the paragraph, and returning to Font Code Number 64 at the end of the paragraph will make playback stop automatically for you, and "Font Change" will blink.

You may use any of the numbers from 90 through 99. You will find this feature more useful if you assign some of the reserved numbers for the type style changes you make most often.

For the training, Font Code Number 99 has been designated italics.

Use the Reserved Font Code Numbers only when you are changing a type style within the text. For example, if the entire job is in italics, there is no need to change to Font Code Number 99.

The Reserved Font Code Numbers will work with whatever language you are using. If you are typing in English and another language in the same project, and if each of those has italics, you may use Font Code Number 99 for both languages.

1. Exercise setup:

- Use a red font for the body of the text.
- Use a red italic font (or, any other red font) for the type style change.
- Reset.
- Enter Justify, 18 1/2 picas.
- Enter a Tab/Index code for single spacing, tab at 2 picas.

2. Enter the text below.

- Place font changes where they are marked.
- Do not actually change the font yet.

TYPE STYLE CHANGES

All type style changes are made by changing the font on playback. You do not need to change the font while you are entering text.

When you want to change the type style, enter a Font Code into memory.

The Font Code causes the printer to stop automatically when playing back. *When playback stops, you can change the font.*

Remember, Font Codes are entered as you are typing; the font is changed when playing back in Final.

3. Play back in final. Make the font changes.

4. Clear memory.

The following is a list of the available fonts and their Font Code Numbers. Charts showing the keyboard locations of characters on the language and specialized fonts are in the *IBM Mag Card Composer Reference Book*.

Language Fonts:

Font	Font Code Number
Brazilian	61
English—United States and United Kingdom	64
French	33
Germanic	43
Hungarian	53
Latin and French Latin	41
Nordic	50
Polish	49
Portuguese	63
Romanian	55
Russian Cyrillic	80
Turkish	51
Yugoslavian	37
Yugoslavian Cyrillic	39

Other Specialized Fonts:

American Bankers Association	84
Bold/Light	45
Copperplate Gothic	79
Copperplate Gothic Double Case	68
Copperplate Gothic Fraction	72
Greek Symbols	56
Mathematical	46
Presswire	57
Ruling	76
Technical Composition	60
Technical Symbols	62
Typewriter Characters	64

Use of the symbol fonts (Greek, Mathematical, and Technical Symbols) is described in a separate manual, *A Guide for the Preparation of Technical Expressions and Equations*, Form No. S549-0903.

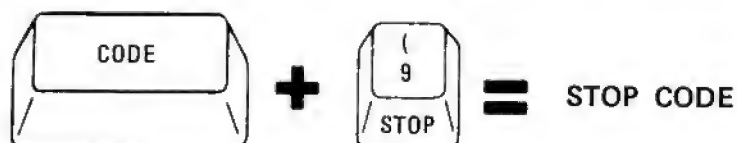
Reserved Font Code Numbers

Font Code Numbers 90 through 99 are reserved for you to assign as you need for your work.

Stop Code

You can also change the appearance of your final copy by changing leading (space between the lines), or by changing escapements for headings.

Enter a Stop code (code "9") where you want to make the leading or escapement change. Playback will stop automatically for you.



- "Stop Code" is displayed on the message panel when you enter the code.
- You do not have to make leading adjustments while entering. Making the changes only when playing in final saves time.
- You do have to change escapement while entering.
- It is a good idea to write down where Stop codes are entered and what change to make when playback stops.

The next exercise uses Stop codes to change from a red heading to yellow text, and to make leading changes.

1. Exercise setup:

- Use a red font for the heading.
- Use a yellow font for the text.
- Reset.
- Enter Justify, 18½ picas.
- Enter a Tab/Index code for single spacing, tab at 2 picas.

2 Enter the text below and place Stop codes where marked.

- Do make the escapement change from red to yellow while you are typing.
- Do not make the leading changes until playback.

LEADING CHANGES $\overset{S}{C}$ ————— Change escapement lever

All leading adjustments are made by changing the setting of the leading dial or by turning the platen knobs to add or subtract leading. $\overset{S}{C}$

Add temporary leading on playback (+5)

Change leading dial on playback (9/15 or 10/15) $\overset{S}{C}$ When you want to alter the leading, a Stop code should be entered into memory.

The Stop code causes the printer to stop automatically when playing back in final. When playback stops, you can make the leading adjustment. $\overset{S}{C}$

Change leading dial on playback (9/12 or 10/12)

Remember, Stop codes are entered as you are typing; leading changes are made when playing back in final.

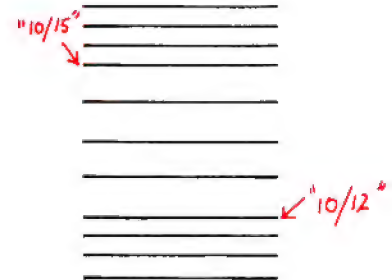
3. Play back in final.

- Remember to use a red font and red escapement for the first line.
- Change the escapement lever to yellow when you change to the yellow font.
- Make the leading changes when playback stops.

4. Clear memory.

The exercise you just did illustrated the correct way to place Stop codes. The rules for placing Stop codes are summarized below:

- To change escapement for a heading:
 - Enter the Stop code after the heading and before the carrier return.
 - Change the escapement lever both when entering text and playing back.
- Temporary leading changes:
 - Used when extra space is required between only two lines.
 - Enter the Stop code at the end of the line before the extra leading is required.
 - Make a note of how much the leading is to be changed (for example, +6 or -4).
 - On playback, roll the platen the correct number of “clicks.” (Remember, the left platen knob moves four points at a time and the right moves one.)
- Permanent leading changes:
 - Used for several lines, or a whole paragraph.
 - Enter the Stop code before the first and after the last line affected.
 - Make a note of the new leading dial setting. (You may want to write the point size of your font and the new setting: for example, 10/15.)
 - On playback, change the leading dial.



Superscripts and Subscripts

Characters typed above or below the normal typing line (such as a degree sign, footnote number, or the “2” in H₂O) can be placed properly by manually rolling the platen up or down.

To enter superscripts or subscripts:

- Enter a Stop code before the superscript or subscript.
- Enter the superscript or subscript. (Use the lowercase “o” for the degree sign.)
- Enter another Stop code and continue entering text.
- When final playback stops, use the platen knobs to click up four points for a superscript and down four points for a subscript.
- When playback stops after printing the superscript or subscript, move four points back to the typing line and continue playback.

Scanning and Stop Codes:

- Scanning will stop for Stop codes, just like playback does.
- Take the same action during scanning that you did when entering text.

Summary

Font Code Number Change:

- Code “f” + 2-digit Font Code Number.
- Used for language or type style changes.
- Stops playback automatically.
- Operator message panel displays “Font Change” when the code is entered or played back.
- Used when changing fonts in the same escapement.

Stop Code:

- Used to stop playback automatically.
- Operator message panel displays “Stop Code” when a Stop code is entered or played back.
- Used for:
 - Temporary leading changes (using the platen knobs).
 - Permanent leading changes (changing the leading dial).
 - Escapement changes for headings.

Stop Code for a Temporary Leading Change:

- Enter the Stop code at the *end* of the line *before* the leading is to be added or subtracted.

Stop Code for a Permanent Leading Change:

- Enter the Stop code at the beginning and end of the lines or paragraphs affected by the leading dial change.

Stop Code for Escapement Change for Headings:

- Enter the Stop code at the end of the line before the change.
- Change the escapement lever both while entering and playing back.

To Identify what a Stop Code is for:

- Temporary leading change—“+” or “—” the number of points to click the platen knobs (example: +6, —4).
- Permanent leading change—point size of font and new leading dial setting (example: 10/15).
- Escapement change—note the new escapement color and font, and make the change both while entering and playing back.

Indented Formats

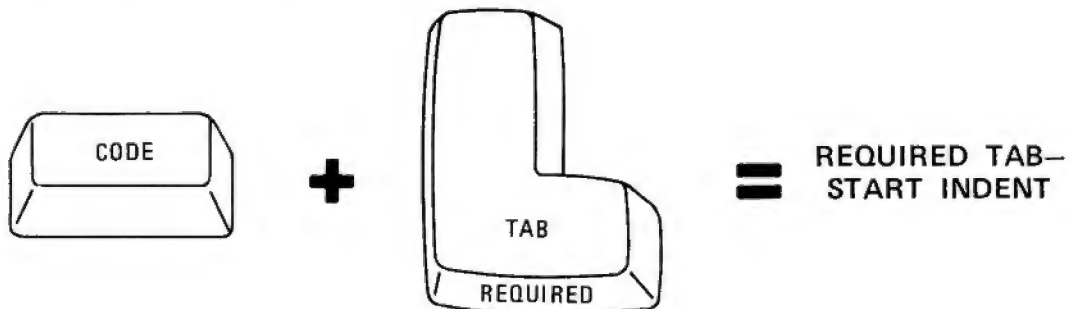
The IBM Mag Card Composer can make applications like the two shown below easier by automatically tabbing for you on many of the lines.

_____	_____	I. _____
	_____	_____
	_____	_____
_____	_____	A. _____
	_____	_____
	_____	B. _____
_____	_____	_____
	_____	_____
	_____	II. _____

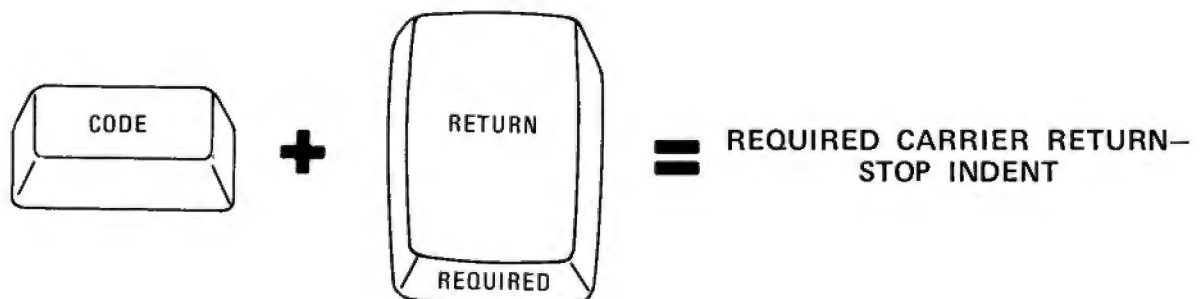
Entering indented formats is done by establishing an indent level, or "telling" the composer how far to tab automatically. Once you have done that, every line will be tabbed until you cancel the indent level, or "tell" the composer to stop tabbing.

The two instructions that control indented formats are:

Required Tab (code TAB) to start the indent.



Required Carrier Return (code CARRIER RETURN) to stop the indent.



When typing indented formats, follow the same typing rules as ordinary text. There are two things to remember:

- Enter the Required Tab only on the *first* line of the indented text. Tabbing is done automatically after that.
- Cancel the indent level at the end of each paragraph. Use a Required Carrier Return to do this.

While typing the next exercise, if you need to make corrections on the same line use the backspace key. If you need to line return, look at the steps listed on the next page.

1. Exercise setup:

- Use any red font.
- Reset.
- Enter Justify, 26 picas.
- Enter a Tab/Index code for single spacing, tab at 7 picas.

2. Enter the following exercise line for line. End with two Required Carrier Returns and a Page End code.

jT tS 64
;CORPORATE STATUS REPORT;

The following report contains the condensed status reports of departments that concern your area.

BUDGET * The Budget Department is at the present time compiling figures for the second half of the year. Cost projections are vague at this time. 2 RCR

Required
Tab DIRECT MAIL * Activity in the Direct Mail Department has increased 28%. Great utilization by the sales force is given as the reason. 2 RCR

PERSONNEL * Increases in staff needs have burdened the Personnel Department. They are running behind on projections at this time. 2 RCR
PE

3. Play in final.

4. Do *not* clear memory.

5. Continue reading.

Line Returning in Indented Formats:

- Depress LINE RET.
 - The carrier returns to the left margin.
- If the correction is in the first word;
 - Depress CHAR/STOP until you reach the error.
 - The first time you depress CHAR/STOP the carrier moves to the indent level.
- If the correction is not in the first word;
 - Depress WORD until you reach the error.
 - The first time you depress WORD the indent level *and* the first word play back.
- If you need to delete the line;
 - Depress CHAR/STOP one time to move to the indent level.
 - Line delete.

Corrections to Indented Formats

When making changes in indented material use the same procedures given for correcting straight text.

- PAR ADV or LINE ADV to the change, delete the error, and type the correction.
- When you PAR ADV through indented material, Required Carrier Returns are recognized as the beginning of a new paragraph.

6. Depress ENTRY and make the following changes to the material in memory. Use PAR ADV and LINE ADV as needed to reach the changes.

CORPORATE STATUS REPORT

The following report contains the condensed status reports of departments that concern your area.

BUDGET	The Budget Department is at the present ^{this} time compiling figures for the second half of the year. Cost projections are vague at this time.
DIRECT MAIL	Activity in the Direct Mail Department has increased 28%. Great utilization by the sales force is given as the reason.
PERSONNEL	Increases in staff needs have burdened the Personnel Department. They are running behind on projections at this time.

7. Do not play back yet.
8. Continue reading.

Scanning Part of Memory

After you have made revisions to indented formats you must scan to adjust the lines, just as you did in regular text.

You can start scanning at the beginning of any line in the memory. If the first part of a job has not been changed, you do not have to scan it again.

To scan a part of memory, follow these steps:

- PAR ADV or LINE ADV to the first line that needs adjusting.
- Scan.
- Record an updated card after you have scanned.

9. Page start, paragraph advance to "BUDGET" and scan.
 10. Play back in final.
 11. Depress ENTRY and record a card.

Adding or Deleting Required Tabs

You can add or delete Required Tabs after material has been entered into memory or recorded on cards.

To add a Required Tab:

- Correct the Tab/Index code if the one you now have does not have the right tabs.
- PAR ADV or LINE ADV to the point where the Required Tab should be added.
- Enter the Required Tab.
 - If you add a Required Tab to a paragraph that did not already have one, replace the regular carrier returns at the end of the paragraph with Required Carrier Returns.
- Scan the text to adjust the lines.

In the next exercise you will add Required Tabs.

1. Place the card from the last exercise in the pack feed slot.
2. Depress ENTRY, reset, and read the card.
3. Depress CHAR/STOP to play back the Format/Line Length code.
4. CHAR DEL one time to remove the old Tab/Index code.
5. Enter a new Tab/Index code for single spacing, with tabs at 2 and 9 picas.
6. Add the Required Tabs where they are marked. Use PAR ADV to reach the changes.

CORPORATE STATUS REPORT

The following report contains the condensed status reports of departments that concern your area.



* BUDGET	The Budget Department is at this time compiling figures for the second half of the year. Cost projections are vague at this time.
* DIRECT MAIL	Activity in the Direct Mail Department has increased 28%. Great utilization by the sales force is the reason.
* PERSONNEL	Increases in staff needs have burdened the Personnel Department. They are behind on projections at this time.

7. Page start.
8. PAR ADV to the "BUDGET" paragraph and scan the rest of the project.
9. Play in final. (Remember, ENTRY is up for final playback.)
10. Depress ENTRY and record.

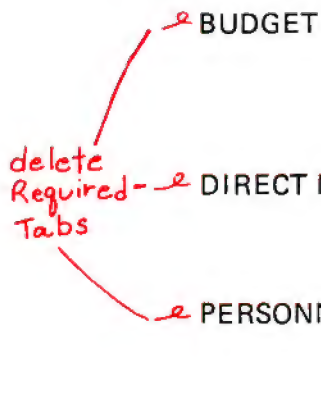
To delete a Required Tab:

- Enter a new Tab/Index code without the tab for the indent level you are removing.
 - This tab may be necessary for other parts of the job. If it is, do not change the Tab/Index code.
- With ENTRY down, move to the Required Tab to be deleted.
- Delete it. (Use WORD DEL.)
- Scan to change the line endings.

In this exercise you will delete the Required Tabs you just added.

CORPORATE STATUS REPORT

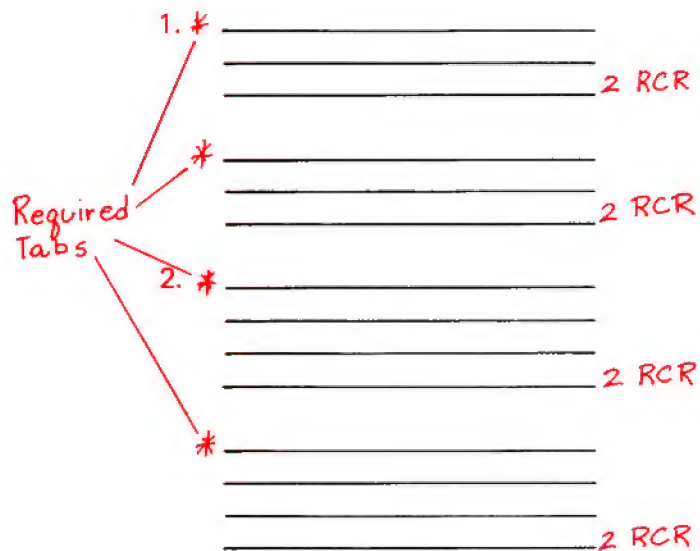
The following report contains the condensed status reports of departments that concern your area.



BUDGET	The Budget Department is at this time compiling figures for the second half of the year. Cost projections are vague at this time.
DIRECT MAIL	Activity in the Direct Mail Department has increased 28%. Great utilization by the sales force is the reason.
PERSONNEL	Increases in staff needs have burdened the Personnel Department. They are behind on projections at this time.

1. Place the card from the last exercise in the pack feed slot.
2. Depress ENTRY. Reset and read the card.
3. Play back the Format/Line Length code.
4. Delete the old Tab/Index code.
5. Enter a new Tab/Index code for single spacing, with a tab at 7 picas.
6. Delete the Required Tabs before "BUDGET", "DIRECT MAIL", and "PERSONNEL".
7. Page start.
8. PAR ADV to "BUDGET" and scan the rest of the job.
9. Play back in final. (Release ENTRY.)
10. Depress ENTRY and record. You may reuse the card.

Some layouts have several paragraphs at the same indent level, like the example below:



To make corrections easier, enter a Required Tab at the beginning and a Required Carrier Return at the end of *each* paragraph, even though they are at the same indent level.

There are other layouts that can be entered using Required Tabs. For example:

Regular paragraphs followed
by indented material

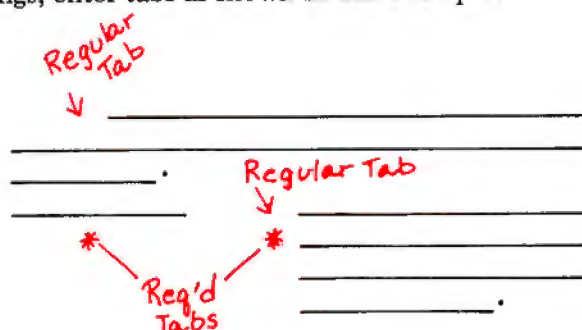
Side headings with indented
material

Hanging indents

In these layouts, the indent level does not begin on the first line of the paragraph. Enter the Required Tabs on the line where the indent level starts. On lines before the indent level, you would enter a regular tab.



When a paragraph with a regular tab is followed by indented material with side headings, enter tabs as shown in this example:



After typing the side heading you are already past the first tab. If you put a Required Tab on that line, the lines which follow it will not be indented far enough.

1. Exercise setup:
 - Place a blank card in the pack feed slot.
 - Use any red font.
 - Reset.
 - Enter Justify, 27½ picas.
 - Enter a Tab/Index code for single spacing, tabs at 2 and 4 picas.
2. Enter the exercise at the top of the next page. Type line for line.
 - Remember to enter Required Tabs on the first line of the *indent level*—not the first line of the paragraphs.

Here are suggestions for further reading on economic growth. Free publications are available as long as the current supply lasts.

- Reg'd
Tabs
- * "(The) Goals of Economic Policy." Report to the committee on Economic Policy, Economic Research Department, Chamber of Commerce of the United States.
 - * "Business History Review." Published quarterly by the Harvard Graduate School of Business Administration. Covers a wide range of interesting accounts of early American business and businessmen.

3. Play back in final.

4. Depress ENTRY and record.

Corrections to these kinds of indented formats are made the same way as regular material, with one exception.

Look at the example below.

Typed Copy:

Reg'd Tab * "Business History Review." Covers a ^{wide} range of interesting accounts of early American business and businessmen. Published quarterly by the Harvard Graduate School of Business Administration.

When the change you have to make is in the part of the paragraph that is *before* the Required Tab, follow these steps:

- Delete the Required Tab first.
- Make the change.
- Adjust the line by depressing LINE once.
- Put the Required Tab back in.

If you do not, when you scan the Required Tab may be in the wrong place and your lines will not adjust properly, as in this example:

Revised Copy—Required Tab not deleted before revision:

Reg'd Tab * "Business History Review." Covers a wide range of interesting accounts of early American business and businessmen. Published quarterly by the Harvard Graduate School of Business Administration.

In this exercise you will make a change to a part of a paragraph that is before the Required Tab.

1. Place the card you just recorded in the pack feed slot.
2. Depress ENTRY, reset, and read the card.
3. Follow these steps to make the correction indicated.
 - Move to the Required Tabs before "Economic" and delete them.
 - Line return to the first line of the paragraph.
 - Make the change and play the rest of the line with ENTRY down (use LINE).
 - Reenter the Required Tabs.

Here are suggestions for further reading on economic growth. Free publications are available as long as the current supply lasts.

* * "(The) Goals of Economic Policy." Report ^{from} to the committee on Economic Policy, Economic Research Department, Chamber of Commerce of the United States.

* * "Business History Review." Published quarterly by the Harvard Graduate School of Business Administration. Covers a wide range of interesting accounts of early American business and businessmen.

4. Page start and paragraph advance to the paragraph where the revision was made.
5. Scan the rest of the job.
6. Play back in final.
7. Depress ENTRY and record.

When the corrections before the Required Tabs are minor (transposed characters, or adding one character to a line), you can usually follow the regular correction procedures. You can also use the procedures for "Character Squeezing" (page 197) or "Forced Justification" (page 198) to make corrections without changing the line endings.

Indented Formats on More than One Page

In the exercises you have typed, you cancelled the indent level at the end of the page because it was also the end of the job.

Some jobs will be longer than one page. If a page ends in the middle of an indented paragraph, use a regular carrier return. The indent level will still be there to start the next page, even if you record the first page.

If the job is longer than one page, do *not* reset after you record each page since reset would cancel the indent level.

Moving the Left Margin

The exercises in this book are all done with the left margin set at "0." That makes determining the line length and tab locations easy.

After you have set up the job or entered text, you may want to move the left margin so your copy is placed in the center of your paper.

When the left margin is moved, your tab settings and line length automatically move over the same distance that you move the margin.

After moving the left margin, you *must* carrier return or Zero Index Carrier Return before entering or playing back text.

1. Move the left margin to 10 and carrier return.
(ENTRY up.)
2. Read the card from the last exercise and play back a few lines in final.
 - The tabs that were at 2 and 4 are now at 12 and 14.
3. Move the left margin back to "0."
4. Clear memory. You may reuse the card.

SUMMARY

Indented formats are entered with Required Tabs. Indent levels are cancelled with Required Carrier Returns.

Errors in Indented Formats:

- Entered a Required Tab by mistake.
 - Line return, line delete.
- Error in the first word on a line.
 - Backspace, or
 - Line return, play by character to the error and correct it.
- Error in the first word on a line.
 - Backspace, or
 - Line return, play by word up to the error and correct it.

Indented Projects—More than One Page:

- If the page ends in the middle of an indented paragraph, end with a *regular* carrier return. Do not reset before typing the next page.

Scanning Part of Memory:

- Scanning can start at the beginning of any line in memory.

Changes to Indented Formats:

- Required Tabs can be added or deleted.
- Remember, if you enter a Required Tab there must be at least one Required Carrier Return at the end of the paragraph.

Several Paragraphs at the Same Indent Level:

- Enter the Required Tabs and Required Carrier Returns for each paragraph to make revising easier.

Hanging Indents or Side Headings:

- Enter the Required Tabs on the line where the indent begins.

Corrections in Hanging Indents or Side Headings:

- If the correction is *after* you entered the Required Tabs, use the normal method.
- If the correction is in the line *before* you entered the Required Tabs;
 - Move to the Required Tabs and delete them.
 - Move to the line needing correction.
 - Make the correction and play back the rest of *that* line only with ENTRY down (use LINE).
 - Reenter the Required Tabs.
 - Scan if necessary.

SUMMARY

Alternate Section

Occasionally you will have material in memory and get a rush job that needs to be corrected or played back. Or, you may be playing back a job in final and get a job that has to be typed immediately.

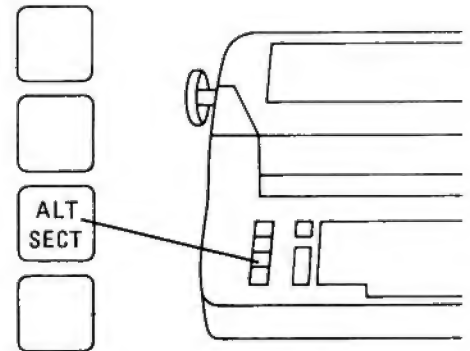
For these situations, the memory can be divided into two sections: Main section and Alternate section. You can use the Alternate section for the rush job, and when you have finished it, return to the Main section to complete the project you were working on.

- The Alternate section “floats” in memory and does not affect text in the Main section when you are either entering or playing back.

To Use the Alternate Section:

- Depress ALT SECT.
- The carrier returns to the left margin when ALT SECT is depressed or released. Therefore, always finish the line you are on before depressing or releasing ALT SECT.
- When ALT SECT is depressed, the “Alternate Section” message is displayed.
- Whenever “Alternate Section” is on, clearing memory affects *only* the Alternate section. It does not affect Main section.

Entry procedures and codes for the Alternate section are the same as those you have been using for the Main section, except that you cannot record or reset in Alternate section.



EXERCISE—Interruptions During Initial Typing

-- 1. Exercise setup:

- Use a yellow font.
 - Reset.
 - Place cards for recording in the pack feed slot.
 - Enter Justify, 21 picas.
 - Enter a Tab/Index code for single spacing with a tab at 3 picas.
2. Enter the heading and the *first* paragraph from the exercise below. Type line for line. Enter two carrier returns after the paragraph.
 3. Continue reading.

jT t S
;BYLAWS AMENDMENTS;

64

It has been proposed that the Bylaws be amended by deleting the phrase "during the month of April." Article VII, Section 2, now reads:

The time and place for the annual meeting of the Corporation shall be determined by the Board of Directors.

The new wording of the Bylaws allows greater flexibility to the staff in setting the date for the meeting.

4. Locate the "Dot Leader Exercise" card you saved.
5. Depress ALT SECT. "Alternate Section" comes on.
6. Read the card through the single card slot.
7. Play back the project in final and clear memory.
 - Remember, memory will only be cleared in the Alternate section. The Main section is not affected.
 - Keep the card. You will use it again.
8. Release ALT SECT. "Alternate Section" goes off.
9. Continue typing the rest of the exercise in the Main section.
10. Depress REC.

EXERCISE—Interruptions During Playback

1. Exercise setup:
 - Use a yellow font.
 - Reset.
2. Release ENTRY.
3. Read the card you have just recorded into the Main section.
4. Start playback and *stop* it after the second paragraph.
5. Depress ENTRY and ALT SECT.
6. Do the following setup for Alternate section:
 - Use a red font.
 - Enter Flush Left, 35 picas.
 - Enter a Tab/Index code for single spacing, no tabs.
7. Type the centered lines below.

RELATIONSHIP BETWEEN MEDIAN FAMILY INCOME
AND EDUCATION COMPLETED
BY 25-YEAR-OLDS AND OLDER

8. Play the centered lines in final (ALT SECT is still down).
9. Clear memory in the Alternate section.
10. Release ALT SECT and finish playing back the project in the Main section.
Remember:
 - ENTRY should be up.
 - Use a yellow font.
11. Clear memory.
12. Save the card for the next exercise.

EXERCISE—Reading for Revisions and Playback

1. Exercise setup:
 - Use a yellow font.
 - Reset.
 - Place the "Bylaws Amendments" card in the pack feed slot.
2. Depress READ (the card stays inside).
3. Make the corrections indicated below.

BYLAWS AMENDMENTS

It has been proposed that the Bylaws be amended by deleting the phrase "during the month of April." Article ~~VI~~^{VI}, Section ~~2~~³ now reads:

The time and place for the annual meeting of the Corporation shall be determined by the Board of Directors.

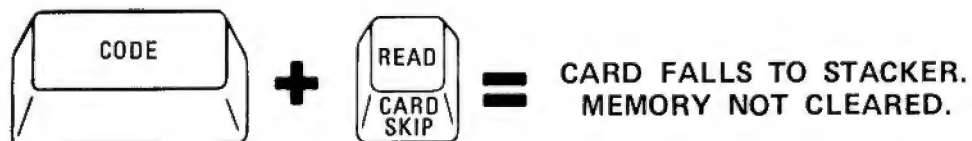
The new wording of the Bylaws allows greater flexibility to the staff in setting the date for the meeting.

4. Do *not* play back in final yet.
5. Continue reading the manual.

Card Skip

There can be only one card in the console at a time. If you have to read a card into the Alternate section, you must remove the card that is inside.

CARD SKIP (code READ) will eject the card but will not clear memory.



6. Card skip to remove the card inside the console.
7. Depress ALT SECT.
8. Locate the "Dot Leader Exercise" card and read it through the single card slot.
9. Play it back in final.
10. Clear memory in the Alternate section.
11. Release ALT SECT and play back the exercise in the Main section in final. The corrections to the exercise were so minor that scanning was not necessary.
12. Depress REC. "Recording" and "Insert Card" will come on. Insert a card through the single card slot.
13. Clear memory.
 - When you record with ENTRY up, memory is not cleared.
 - You may reuse these cards.

If you try to read a card into Main section and you have text in the Alternate section, it will not read. "Reading" will be on, and "Alternate Section" and "Remove Card" will both blink. Clear memory in the Alternate section, then read into the Main section.

Verify

Verify is a way of playing back *everything* that is in memory. In verify, every code prints with a symbol, and the copy plays back line for line without adjusting.

Verify is used when you need to find out how something was entered, and do not have entry copy to look at. It is also used when your playback is incorrect and you are not sure why.

You can verify all of the text in memory, or you can advance to a specific place and verify a portion of the text.

The examples below show final copy and verify copy of the same lines of text. A complete list of the printed codes is on the next page.

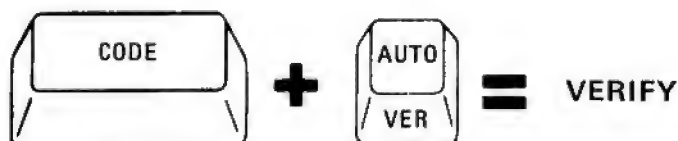
Final copy

Beginning on August 21, 1858, Abraham Lincoln and Stephen A. Douglas met nine times in public debates. These debates were held prior to the senatorial election of 1859 in which Douglas defeated Lincoln. This initial defeat did not stop the politically-minded Lincoln. In the presidential election of 1860, the Lincoln-Hamlin ticket defeated three others . . . including Stephen A. Douglas.

Verify copy

01 j 64
T tS
t Beginning on August 21, 1858, Abraham Lincoln and Stephen A. Douglas met
02 nine times in public debates. These debates were held prior to the senatorial election of
03 1859 in which Douglas defeated Lincoln. This initial defeat did not stop the politically-
04 minded Lincoln. In the presidential election of 1860, the Lincoln-Hamlin ticket de-
05 feated three others . . . including Stephen A. Douglas.
06 c
07 E

Verify is entered by coding the AUTO button. ENTRY must be down. Every line that you can reach with LINE ADV is assigned a number, including lines that would normally not print on final copy.



Verify print will stop if you depress LINE, WORD, or CHAR/STOP. Coding AUTO again will cause it to resume, with a new line number of "01".

If you would like to see how it works, play back any job you have saved (or a prerecorded card).

Verify Symbols

These are the symbols for non-printing codes in verify playback. (If you do not have a U.S. text font on the printer, your symbols may not match.)

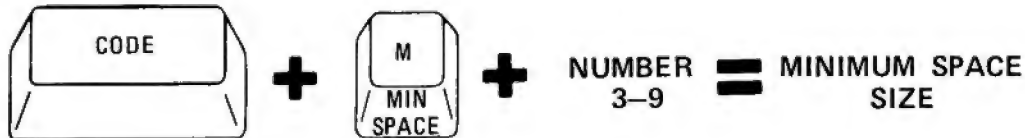
- {t Tab
- {T Required Tab
- {c Carrier Return
- {C Required Carrier Return
- {i Index
- {Z Zero Index Carrier Return
- {1 Space-1
- {3 Space-3
- {b Backspace-1
- {B Backspace-6
- {E Page End
- {- Required Hyphen
- {s Stop Code
- {n No-Print
- {p No-Print End
- {F_ Font Change
(The two-digit Font Code Number will print after the {F.)
- {o Decimal Tab Sequence (either DEC TAB "." or DEC TAB ",")
- {u Centering Sequence

Codes that print on your entry copy such as Dot Leader or Space Position look the same in verify.

Minimum Space Size

The normal space size is three units. When you type in flush left, the space size is always three. When you are in justify or ragged right, the space size will be no smaller than three units but it may be larger because of the extra units that are added to make the text expand to the line length.

By coding the “m” key (MIN SP) you can alter the normal space size. You can make the Minimum Space Size anywhere between three and nine units. (The Space-3 and Space-1 codes remain the same when you change the Minimum Space Size.)



To enter a new Minimum Space Size:

- ENTRY must be down.
- Enter a Required Carrier Return.
- Enter MIN SP (code “m”).
 - The characters “m—” print.
- Enter a number between 3 and 9.
- Carrier return.

1. Exercise setup:
 - Use a red font.
 - Reset.
 - Enter Flush Left, 16 picas.
 - Enter a Tab/Index code for single spacing, no tabs.
2. Type the line below, ending with a Required Carrier Return.

The sky is blue today.
3. Enter a MIN SP instruction and change the space size to 6.
4. Type the line again, ending with a Required Carrier Return.
5. Enter a MIN SP instruction and change the space size to 9.
6. Type the line again, ending with a Required Carrier Return.
7. Change the MIN SP back to 3.
8. Play back in final.
9. Clear memory.

If you make a mistake:

- You keyed MIN SP by accident, carrier return. The composer prints an "x" over the "m" and the space size remains unchanged.
- You typed a letter (or, the number "1" or "2") instead of a number between 3 and 9. The "m—" prints again. Type a number between 3 and 9.
- You typed an incorrect number. The space size is changed as soon as you carrier return. Line return, character delete, and enter MIN SP again.
- You typed an incorrect number and noticed it before the carrier return. Backspace. The "m—" will print again. Enter the correct number and carrier return.

Additional Information about Minimum Space Size

When you enter MIN SP it prints on your entry copy, on a verify copy, and on playback with ENTRY down.

When you play back in final, or scan, the Minimum Space Size is changed according to the number you entered, but the instruction does not take up an extra line on your page, or interfere with the line count in scan.

Scanning stops after a Minimum Space Size. To keep it, depress AUTO. To remove it, line return and character delete.

The new Minimum Space Size will be honored until it is changed back until you reset, or until the composer is turned off.

If you are revising, and wish to change MIN SP, you can reach it with LINE ADV, and delete it with CHAR DEL.

If you are at the beginning of memory, you may enter MIN SP first, or you may key a Format/Line Length or a Tab/Index code. MIN SP will not be accepted if you try to enter it immediately after typing any text.

If you are within text and need to change MIN SP, enter a Required Carrier Return.

Multiple Card Pages

Some of the pages you type will have more than 50 lines of information. Since a magnetic card can hold up to 50 lines, these pages will require more than one card when you record.

In the next exercise you will duplicate a page that is on one card. The exercise will rearrange the page so that it requires two cards.

1. Duplicate exercise card 2. As a reminder,
 - ENTRY down. Cards for recording in the pack feed slot.
 - Reset.
 - Read the prerecorded card through the single card slot.
 - Remove the prerecorded card and depress REC.
2. Do the following exercise setup:
 - Use a yellow font.
 - Left margin at zero.
 - Reset.
 - Place the card you just duplicated in the pack feed slot (remove any other cards).
3. With ENTRY down, read the card.
 - "Card Inside" is lighted on the message panel.
 - Remember when you read with ENTRY down, you are "telling" the composer that you intend to make changes to the card. You will need to update the card after you make changes, so the card stays inside the card unit.
4. Scan the text, using the following:
 - Enter "99" for your line count.
 - Scanning stops after the Format/Line Length code. Backspace one time to remove it.
 - In scan the carrier moves $1\frac{1}{2}$ picas to the right and sets up a temporary margin there. This is *only* in effect when the "Scan" light is on. It leaves room for the line numbers to print.
 - Enter Justify, 24 picas. The carrier moved over after you entered the "j" and you are now at $1\frac{1}{2}$ picas. $1\frac{1}{2} + 24 = 25\frac{1}{2}$. The carrier should be at $25\frac{1}{2}$ to set a 24 pica line.
 - Depress AUTO. The Tab/Index code will play back.
 - Depress AUTO again, and make hyphenation decisions as needed until you reach the end of text.
5. Depress REC.
 - "Recording" is on. When the card inside is filled, there will still be text to record.
 - "Page Continued", "Recording" and "Insert Card" are all on.
 - All the text would not fit on the card that was inside, and you are being asked to supply another card so it can finish recording.
6. Insert a card in the single card slot.
 - "Page Continued" and "Insert Card" go out.
 - "Recording" is still on until all the text is recorded.

Final Playback of a Multiple Card Page

If you are reading to play back in final (with ENTRY up), all the cards which make up the page will be read and dropped into the stacker.

“Reading” will stay on while all the cards are being read.

1. Exercise setup:
 - Use a yellow font.
 - Reset.
 - Put the cards you just recorded in the pack feed slot.
2. With ENTRY up, depress READ.
3. Play back in final.
4. Clear memory. You may reuse the cards.

Revising a Multiple Card Page

When you read a card for revisions (ENTRY is down), the card stays inside the card unit so that you can record on it after you have made changes.

There can only be one card inside the card unit at a time. When you read a multiple card page for revision, the following things will happen:

- When the first card has been read, and the composer sees no Page End code, it will try to read the next card in the pack feed slot.
- The first card comes out of the single card slot with “Reading”, “Page Continued”, and “Remove Card” lighted.
- When you remove the card, “Page Continued” and “Remove Card” go out, and reading continues automatically.
- When reading is completed, the last card is still inside the card unit, and “Card Inside” is lighted.

When you make changes, scan, and record, the composer records on the card inside, then asks you for another card to finish recording. If the revisions removed enough lines so that all the project will now fit on one card, these lights will not come on.

SUMMARY

Alternate Section:

- Divides memory for rush jobs.
- Works like Main section except;
 - You cannot record.
 - You cannot reset.
- If anything is in Alternate section, you cannot read into Main section.

Card Skip:

- Code READ.
- Removes the card from the console.
- Does not clear memory.

Verify Print:

- Used to play back all codes in memory.
- Assigns a printing code to codes which normally do not print.
- Plays back line for line and does not adjust the text.
- Entered by code AUTO.
- Numbers the lines as they print.

Minimum Space Size:

- Code "m" and a number from 3—9.
- Changes Minimum Space Size.
- Can be entered at beginning of memory.
- Can be entered within a job *after* a Required Carrier Return.
- Stops scanning like a Format/Line Length or Tab/Index code.

Multiple Card Pages:

- Recording.
 - If there are enough cards available to record on, the page will be recorded without stopping.
 - If there are not enough cards available to record on, "Recording", "Insert Card" and "Page Continued" come on. Insert a card through the single card slot.
- Playback.
 - With ENTRY up, all cards will be read.
 - With ENTRY down, the first card will be read. It will come out of the single card slot; "Reading", "Remove Card" and "Page Continued" will be on. Remove the card and reading will continue. The last card of the page will stay inside.

Scan Temporary Margin:

- Whenever "Scan" is lighted, a 1½ pica temporary left margin is in effect.
- If you have to set a line length or tabs when "Scan" is on, add 1½ picas to the position you want. Example: setting a tab at 11½ when "Scan" is on gives you a tab at 10 picas.

SUMMARY

CHANGING PAGE FORMATS

Changing the Format/Line Length

You may have to change the format, the line length, or both during a project, like these examples.

Format Change	Line Length Change
j _____ 64 _____ _____	j _____ 64 _____ _____
r _____ 64 _____ _____	j _____ 64 _____ _____
j _____ 64 _____ _____	j _____ 64 _____ _____

When either the format or the line length changes, follow these steps:

- Enter the new format (you must be at the left margin).
 - The carrier moves over to the current line length.
- Set the line length.
 - If you are not changing the line length, carrier return.
 - If you are changing the line length, space or backspace to the new line length and carrier return.

The composer will “remember” where these changes were made. The changes will be recorded along with the text, if you record the project.

If you have several short lines, such as in a list or as in the next exercise, it is faster to use flush left to type them than to use Space Position codes to keep them from expanding. (If you want to review Space Position codes, see page 49.)

In the next exercise you will change the format from justify, to flush left for the short lines, and back to justify again.

1. Exercise setup:
 - Use a red font.
 - Reset.
 - Enter Justify, 24 picas.
 - Enter a Tab/Index code for single spacing, no tabs.
2. Enter the text.
 - Remember to change to flush left for the list, and back to justify for the last paragraph.

jTcS 64
Due to subject matter changes, information in the report now
under approval is out of date. This is a summary of the re-
visions to the first four chapters of the draft of the report.
① Chapter One—No change 64
Chapter Two—Rewrite
Chapter Three—No change
Chapter Four—Reorganize
① Chapters Five through Ten are to be reviewed no later than 64
July 18. If there will be a delay in meeting this deadline the
editor will be informed immediately.

3. Play back in final.
4. Clear memory.

Changing the Tab/Index Code

You may also have to change the Tab/Index code during a project.

To change the Tab/Index code:

- Type (or play back, if you are revising) to the line where you have to change the Tab/Index code.
- End the last line before the change with a Required Carrier Return.
- Enter the new Tab/Index code.
- When you carrier return to end the code, the composer will put an extra carrier return (or two, if you are in double spacing) on your entry copy.
 - This carrier return appears only on the entry copy.
 - It does not leave an extra blank line on final playback, nor does it affect the line count in scan.

1. Exercise setup:

- Use a red font.
- Reset.
- Enter Justify, 29 picas.
- Enter a Tab/Index code for single spacing, no tabs.

2. Type the exercise material below. Type Required Carrier Returns and new Tab/Index codes where they are marked. Remember, the extra carrier returns are on your entry copy only.

jTcS

64

;ANNUAL DINNER;

The Annual Dinner will be held on Saturday, March 16, at 7:00 in the Gold Ballroom of the Franklin Hotel. Below is the menu for the evening.

Details of submitting your reservations follow the menu on this page. RCR

RCR

TD

;MENU;

Tossed Green Salad;Blue Cheese Dressing

;Prime Rib Au Jus;

Asparagus;Hollandaise Sauce

;Baked Alaska;RCR

TS

Please send your request for reservations to the Personnel Office, and indicate (1) the name in which the reservation is made, (2) your department number, and (3) the number in your party. If you wish to cancel a reservation that has already been made, contact John R. Morrison in the Personnel Office.

3. Play back in final.

4. Do not clear memory yet.

Additional Information About the Tab/Index Code

Up to now you have been entering the entire Tab/Index code whenever you started a project.

If you are within a job, and find that you need to change only the indexing, you may enter a partial Tab/Index code.

To change only the indexing, enter the following:

- Required Carrier Return.
- Code "t".
- Code "i" or "ii".
- Carrier return.

When you are changing only the indexing, do not clear any tabs and do not tab to any of the tab stops.

If you are within a job and want to clear all the tabs but leave the indexing the way it is, enter the following:

- Required Carrier Return.
- Code "t".
- Depress CLR and carrier return.
- Carrier return.

If you are within a job and want to set additional tabs, enter the following:

- Required Carrier Return.
- Code "t".
- Space to the new tab location and depress SET.
- Any tabs before the one you set will print a "t" as you space across them. If you no longer want that tab, depress CLR. The character "o" will print over the "t" and that tab is cleared.
- Space across until all the tabs in effect print a "t". This is called verifying the tabs.
- Carrier return.

If you clear all the tabs, and then try to change the indexing, the coded "i" will be ignored.

If you want to do more than one thing in a Tab/Index code, you must follow the order in which you learned to enter the code: code "t", indexing information, tab clearing, tab setting. You cannot go backward in this sequence.

Scanning Projects with Formatting Changes

When you have changed formats within a project, scanning will stop for each of the changes. When scanning stops at the changes, a reference line will print. In the example below, there is a change to double spacing on line 6. The number "05" and the text on line 5 prints, then the new Tab/Index code, and scanning stops. By stopping for formatting changes and printing a reference, the composer is verifying for you that the changes exist, and where they are. Because scanning stops for the changes, you have the opportunity to make corrections to them.

To continue scanning, depress AUTO.

Example:

```
c-99
00
00j                                64
    TcS
05 Details of submitting your reservations follow the menu on this page.
06
    TD
15 ;Baked Alaska;
16
    TS
21 Personnel Office.
22
23-
```

5. Scan the exercise you have in memory.
 - Each time scanning stops, depress AUTO.
6. Clear memory.

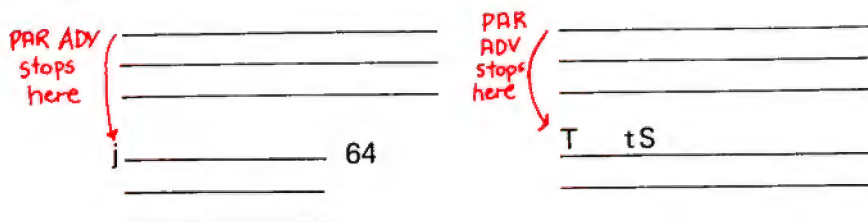
As you know, the steps for hyphenating words while scanning are the same ones you learned for entry playback. However, there is a situation which creates an exception. This will happen when you have a hyphenation decision on the last line of your line count. Since this will probably happen rarely in your work, it is covered only in the *IBM Mag Card Composer Reference Book* on page 27, "Hyphenation Decisions on the Last Line of Line Count."

Code Paragraph Advance Compared to Paragraph Advance

Depressing PAR ADV takes you to the first character of a paragraph—the tab or a text character.

If you have changed the Format/Line Length or Tab/Index code at the beginning of a paragraph, PAR ADV will go past it. It will also pass a Stop code that is before the tab or the first character.

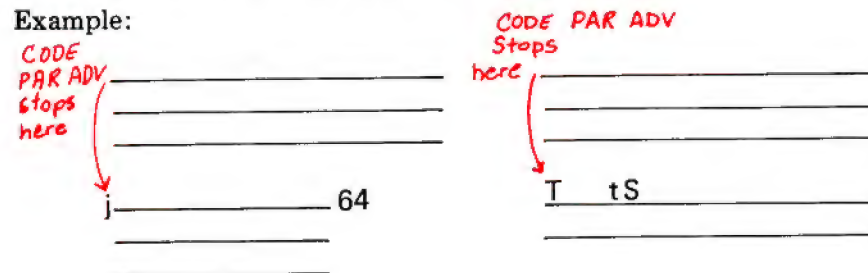
Example:



If you wanted to go to the Format/Line Length, Tab/Index, or Stop codes, you would have to line return to back up to them.

If you want to move directly to the Format/Line Length, Tab/Index, or Stop codes, use code PAR ADV.

Example:



If you have these format changes but they are not at the beginning of a paragraph, code PAR ADV will not stop at them. Use LINE ADV to reach them.

Runarounds

So far when you have scanned you have entered a line count of "99" to scan all the lines in memory.* There are times, such as when creating runarounds, that you will want to scan only part of the memory.

Scanning can start at the beginning of any line in memory, and it will cover as many lines as you wish. If only the last half of a page has changes, you can paragraph advance to the point where the changes begin and scan from there on. This is faster than scanning the entire page.

You have seen that there are lines on your entry copy that do not appear on your final copy (like Format/Line Length, and Tab/Index codes). When you are scanning, these lines are *not* included in the line count. The only lines included are those which print (or extra carrier returns).

In the next exercise you will use scan to create a runaround.

1. Make a duplicate of prerecorded exercise card 3.
2. Put the prerecorded exercise card back in its folder.

To create a Right Runaround:

- Enter a Required Tab on the first line to be indented.
- Enter a Required Carrier Return at the end of the last line to be indented.

Right
Runaround

To create a Left Runaround:

- Enter a new Format/Line Length code to indicate where the lines should end.

Left
Runaround

To return to the full line length:

- Enter a Format/Line Length code for the original line length.

*If there are more than 99 lines, scanning stops at 99. Scan again, using 99 as the line count.

Most people, when they hear the word plasma, think of the blood derivative. To the research scientist, however, a plasma is a very hot gas, perhaps millions of degrees in temperature. At these temperatures, it is possible to fuse together atoms of hydrogen, with a great release of energy. If the process can be successfully sustained and controlled, we would have a virtually limitless source of power, because there is an abundance of hydrogen in the world's oceans. One of the still unresolved problems is how to measure the temperature of the plasma. The concept of temperature is based on the average amount of energy of the molecules of a material. But in the case of plasmas, molecules have been torn apart by the high temperatures. Faced with these conditions, scientists must turn to new concepts and perhaps new definitions of temperatures before they can devise methods for measuring plasmas. If they are successful, the world may never again have to worry about having enough energy and power.

5 lines at full line length (22 Picas)

6 lines at a 10-Pica indent (right runaround)

4 lines at full line length

6 lines at 12-Pica line length (left runaround)

All remaining lines at full line length (22 Picas)

There are five parts to this runaround. You scan for each part, so you will enter scan five times to create it.

1. Exercise setup:

- Use any red font.
- ENTRY down.
- Reset.
- Place the card you duplicated in the pack feed slot.
- Read the card (it stays inside).

2. Scanning at the full line length:

- Enter scan (the "Scan" light is blinking).
- When "c—" prints, enter 5 and carrier return.
- The Format/Line Length code prints, and "Scan" is blinking again. For this exercise, the Format/Line Length code will not change.
- The next thing in memory is the Tab/Index code. CHAR DEL one time to remove it.
- Enter a new Tab/Index code for single spacing, with a tab at 10 picas.
 - Remember, when the "Scan" light is on, you must add 1½ picas to the carrier position, because of the scan temporary margin. To set a tab at 10 picas, it will look like 11½ picas.

- Depress AUTO. Scanning continues, with the light on solid.
 - Make hyphenation decisions if they are needed.
 - When the line count of 5 has been scanned, a reference line will print. It will contain the line number followed by an em dash, and a line of text.
 - The bell rings, and the "Scan" light has gone out.
3. Scanning for the right runaround:
- Enter a Required Tab.
 - Enter scan again, with a line count of 6 (remember to carrier return). Scanning will stop when 6 lines have been scanned, and the reference line has printed.
 - Your right runaround is all at an indent level. It must be cancelled with a required Carrier Return.
 - Line return once. Play back the line (use CHAR/STOP for the last word) and delete the regular carrier return.
 - Enter a Required Carrier Return. Notice that when you played back the line this time it is not lined up with the reference line. The scan temporary margin caused your text to be moved over.
4. Scanning at the full line length:
- Scan 4 lines for this section of the runaround.
5. Scanning for the left runaround.
- Enter a new Format/Line Length code for Justify, 12 picas. The "Scan" light is not on yet. Do not add 1½ picas to the carrier position.
 - Enter scan again, and a line count of 6.
6. Scanning at the full line length:
- Enter a Format/Line Length code for Justify 22 picas. The "Scan" light is not on. Do not add 1½ picas.
 - Enter scan, with a line count of 99 to scan all the rest of the lines in memory.
7. Depress REC.
8. Reset.
9. With ENTRY up, read the card and play back a copy in final.
- Remember to clear memory after playback.

Projects Longer than One Page

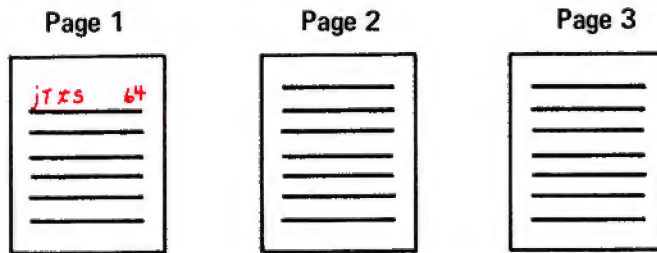
When you make formatting changes in a project, the Formatting Storage Area is updated. If your project is longer than one page, this means that after you record the first page, the composer is still set up to type the next page—you do not need to enter the Format/Line Length code or Tab/Index code again. Therefore, you should not reset between pages of a project.

These are the things that are “remembered” for you:

- Format/Line Length code
- Tab/Index code
- Minimum Space Size (if you changed it)
- Font Code Number (if you changed it)
- Indent level (if you had one)

If you reset, all this information would have to be reentered before you could type the next page correctly.

If you type a three-page project, and do not change the Format/Line Length code or Tab/Index code within it, your pages would be recorded as in the example below.



Therefore, if you want to play back or revise only page two or three, you will need to read page one first, and then clear memory. That sets up the Formatting Storage Area so the composer “knows” how to play back page two or three.

In many cases, you will change the Format/Line Length code, Font Code Number, etc., several times throughout a project. Because of that, this is the recommended procedure for revising or playing back only certain pages of a project:

- Place the cards for the entire project in the pack feed slot.
- Depress READ, then clear memory for each page up to the one you want to play back or revise. Do NOT reset after you clear.
- Read the page and play it back or revise it.

Changing Format and/or Line Length Within a Project:

- Carrier return.
- Enter the format.
 - The carrier tabs to the line length in effect.
- Space or backspace if setting a new line length.
- Carrier return.

Changing Tab/Index Information Within a Project:

- Required Carrier Return.
- Enter the new Tab/Index code.
- There will be an extra carrier return on entry copy *only*.

Entering Partial Tab/Index Codes:

- Changing indexing only.
 - Code “t”.
 - Code “i” or “ii”.
 - Carrier return.
- Clearing tabs only.
 - Code “t”.
 - Depress CLR and carrier return.
 - Carrier return.
- Changing tabs only.
 - Code “t”.
 - Depress CLR and carrier return.
 - Space to tabs and depress SET.
 - Carrier return.
- Adding tabs.
 - Code “t”.
 - Space to the new tab location and depress SET (any tabs still in effect print “t” as you space across).
 - Verify all other tabs that you want to keep by spacing through them.
 - Carrier return.

Scanning a Project With Formatting Changes:

- Scanning will stop after a Format/Line Length or Tab/Index code.
- The last text line before the change will print.
- Depress AUTO to continue scanning.

Code PAR ADV:

- If a Format/Line Length, Tab/Index, or Stop code is at the beginning of a paragraph, use code PAR ADV to reach it.
- Code PAR ADV will not stop at a Format/Line Length, Tab/Index or Stop code that is not at the beginning of a paragraph.

SUMMARY

Scanning to Create Runarounds:

- Right runaround.
 - Enter a Required Tab.
 - Enter scan.
 - When the reference line prints, line return.
 - Play back the line by word. Use CHAR/STOP for the last word.
Do not play back the carrier return. Delete the carrier return
and enter a Required Carrier Return.
- Left runaround.
 - Enter the new Format/Line Length code.
 - Enter scan.

SUMMARY

COLUMNS

With the IBM Mag Card Composer you can type straight text and have it play back in columns.

Example:

jT tS 64

All customer orders are processed and edited for billing by the Accounts Payable Department. The price, discount, and applicable tax rate for each item on an order is determined by a receipt clerk. The order is then sent to an extension clerk, who calculates the amount to bill the customer.

To produce a column layout, you insert a Column Begin code (code "c") where each column should begin, and end the layout with a Column End code (code "e").

64

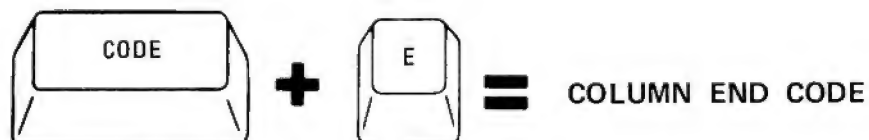
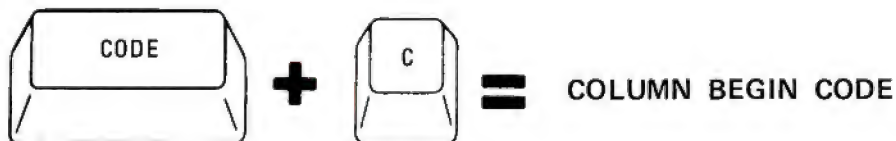
T tS

All customer orders are processed and edited for billing by the Accounts Payable Department. The price, discount, and applicable tax rate for each item on

©

an order is determined by a receipt clerk. The order is then sent to an extension clerk, who calculates the amount to bill the customer.

e



Final playback will look like this:

All customer orders are processed and edited for billing by the Accounts Payable Department. The price, discount, and applicable tax rate for each item on

an order is determined by a receipt clerk. The order is then sent to an extension clerk, who calculates the amount to bill the customer.

1. Make another duplicate of exercise card 3.
2. Replace the prerecorded card in its folder.

The next exercise will show you how scanning can help in setting up a column layout.

1. Exercise setup:
 - Use a red font.
 - Reset.
 - Place the card you duplicated in the pack feed slot.
2. Read the card.
3. Scan the text, with a line count of 99.
4. When scanning stops after the Format/Line Length code, backspace to remove the one in memory, and enter Justify, 18 picas.
 - Remember, the "Scan" light is on now, so add 1½ picas for the scan temporary margin.
 - Depress AUTO.
5. When scanning stops after the Tab/Index code, depress AUTO to continue.
 - The "Scan" light will go out when all the lines have been counted and adjusted.
6. Continue reading the manual.

Scanning tells you how many lines there are in memory.

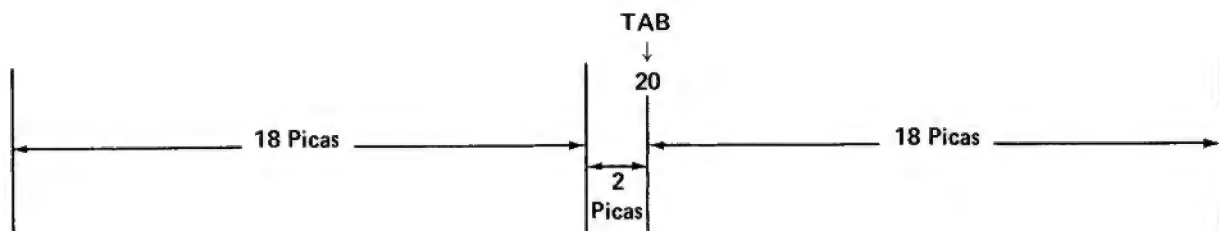
If there are extra carrier returns at the end of the project, they will show as line numbers with no text. The last line number with text printed tells you how many actual text lines there are.

Divide this number by the number of columns you want to have on playback, and you will know where to place the Column Begin codes.

Column Margin Tabs

When the text plays back in columns, the left margin is “moving” to the point where the next column is to begin. You tell it where to “move” the left margin by setting column margin tabs.

If your columns are each 18 picas and you want 2 picas between them, your first column margin tab will be at 20.



Column margin tabs must be entered before the first Column Begin code.

7. Page start and play back the Format/Line Length code.
8. Character delete once to delete the Tab/Index code.
9. Enter a new Tab/Index code for single spacing, with a tab at 20. (Your column is 18 picas wide, and this gives you 2 picas between your columns.)
 - This is your column margin tab.
10. Continue reading the manual.

Column Begin Code

Enter a Column Begin code (code “c”) to mark the first line of each column.

- You must be at either the left margin or the scan temporary margin to enter the “c”.
- When you enter a Column Begin code, a “c” prints at the left margin and the carrier returns.

11. Enter a Column Begin code.
12. Enter scan:
 - Enter a line count of half the text lines.
 - When scanning reaches line count, enter a Column Begin code.
13. Enter scan again:
 - Enter a line count of 99 to scan all remaining lines.
14. Continue reading the manual.

Column End Code

Enter a Column End code (code “e”) at the end of the column layout.

- You must be at either the left margin or the scan temporary margin to enter the “e”.
- When you enter a Column End code, an “e” prints at the left margin and the carrier returns.

15. When scanning stops, enter a Column End code.
 16. Enter a Page End code and depress REC.

If you are scanning a project that already has column codes in it, scanning will stop at the codes. If you want to leave the codes where they are, depress AUTO to scan. If you want to remove them, line return, and character delete. (If any of the reference lines that printed before the column codes were short, scan the project again after removing all the codes.)

17. With ENTRY up, read the card and play back in final.
 18. Clear memory.

The exercise you just completed has tabs for the beginning of the columns, but no tabs within the text.

Tabs Within the Columns

In column format, there are two types of tabs that the composer uses. The first are the column margin tabs which mark the beginning of columns, and the second are the tabs within the columns. Each of these types of tabs has its own Tab/Index code.

These are the steps to follow for a column job with both column margin tabs and tabs within the columns.

- Enter the Format/Line Length code.
- Enter the Tab/Index code for the column margin tabs.
- Enter the first Column Begin code.
- Enter the Tab/Index code for the tabs within the columns.
 - You may enter additional Tab/Index codes to change tab settings or line spacing within the columns. If you would like to review those steps, they are on page 86.

If you have the same tabs throughout the project, enter the Tab/Index code only after the first Column Begin code. When the composer “moves the margin” to begin the next column, the tabs for the text will move over with it.

In the exercise below, you will be entering text to play back in three columns.

1. Exercise setup:

- Use a yellow font.
- Reset.
- Enter Justify, 16 picas.
- Enter the Tab/Index code for the column margins. Allow 2 picas between columns. (16 + 2 = 18, set tabs at 18 and 36.)

2. Enter the first Column Begin code.

3. Enter the Tab/Index code for the tabs within the text. (Each column has a tab at 1 pica. Enter this Tab/Index code only one time. It will be moved over correctly on final playback.)
- Your copy should look like this:

jT	64	t	tS
c			
T	tS		

4. Enter the text below line for line. Enter the other column codes where they are marked.

Today's volume of paperwork has been characterized by one Congressional committee as "a jungle which must be pruned," and by another as "an avalanche which threatens to bury us."

c

Everyone who has studied the matter has agreed that there is a critical need for management control of this severe problem. Non-essential paperwork poses a threat to combat readiness, reduces administrative efficiency, and adversely affects morale. Much has been done about the problem, and much has been accomplished in the last year.

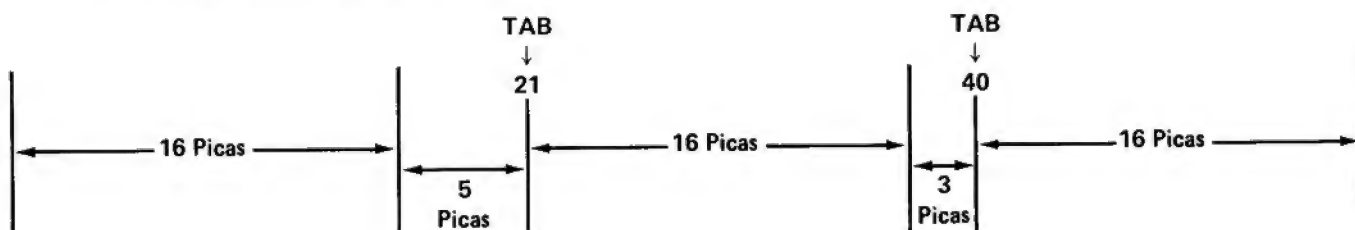
e

5. Play back in final.
6. Do not clear memory yet.
7. Continue reading the manual.

Unequal Space Between Columns

When the amount of space between the columns is unequal, use the following steps to determine tab settings for the column margins.

- To find the first tab setting:
 - Add the line length to the amount of space desired between the first two columns.
- To find all other tab settings:
 - Add the line length plus the amount of space between the next two columns to the last tab setting.



To play back the 16 pica material you have in memory with 5 picas between the first and second columns and 3 picas between the second and third columns:

8. Page start.
9. Play back the Format/Line Length code.
10. Character delete to remove the Tab/Index code for the column margins.
11. Enter a new Tab/Index code with tabs at 21 and 40.
12. Insert a sheet of paper lengthwise.
13. Play back in final.
14. Clear memory.

Different Formats for Columns

Columns may be formatted in many different ways. For instance, one column may be justified, the next one flush left, and the next ragged right. Or, you may change from single to double indexing at any point. Each column can have its own formatting, regardless of how many columns you have.

Example:

Column 1 Justified	Column 2 Ragged Right	Column 3 Flush Left	Column 4 Double Spaced	Column 5 Min Sp of 6
				

Leading for Column Format

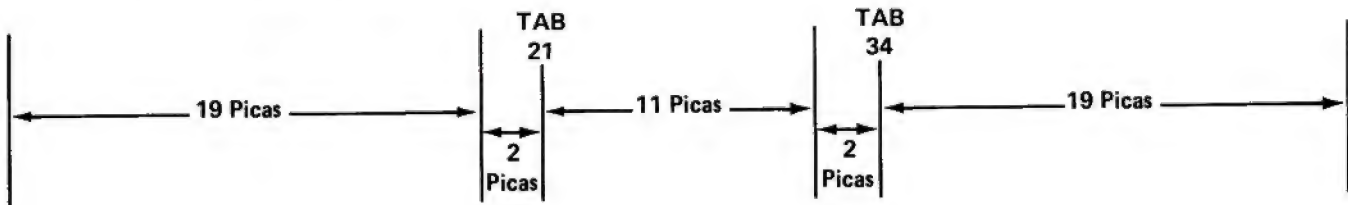
When entering and playing back material with column codes, the leading dial setting for each paragraph should be the same.

Extra leading cannot be added to one column without affecting the other columns.

However, by specifying single or double indexing in a Tab/Index code, you can have one column single spaced and the next double spaced, or part of any column single and double spaced.

Columns of Unequal Widths

Columns may be unequal in width.



When columns are unequal in width, a new line length must be entered at the beginning of each new column.

1. Exercise setup:
 - Use a yellow font.
 - Reset.
2. Enter Justify, 19 picas (the Format/Line Length code for the first column).
3. Enter the Tab/Index code for the column margins with single spacing and tabs at 21 and 34.
4. Enter the first Column Begin code. Since there are no tabs within the text, you do not need the second Tab/Index code for this exercise.
5. Enter the paragraph below. Do not type line for line.

The IBM Mag Card Composer uses the single-element concept introduced by the IBM "Selectric" Typewriter.

6. Enter the next Column Begin code.
7. Enter Justify, 11 picas (the Format/Line Length code for the second column).
 - When you enter the "j" the carrier tabs over to 19.
 - Backspace to 11 and carrier return.
8. Enter the paragraph below.

Type fonts are identified by an abbreviation printed on top of the font.

9. Enter the next Column Begin code.
10. Enter Justify, 19 picas (the Format/Line Length code for the third column).
11. Enter the paragraph below. Do not type line for line.

When you select a point size, you must also set the Escape-ment Lever. It is color coded for easy identification.

12. Enter a Column End code at the end of the project.
13. Insert a sheet of paper lengthwise, and play back in final.
14. Clear memory.

Column format can also be used when the text you are typing has side headings, like this example:

Press Roman Serif	A practical type face characterized both by its distinctive appearance and its legibility. An analysis of this type reveals that it has no pronounced thick and thin strokes. Its overall pleasing symmetry produces quality type for a variety of applications, including newsletters and brochures.
Pyramid Square Serif	A uniquely designed face featuring a square serif. It lends itself particularly well to material requiring special emphasis. It also provides a good effect for text type and is especially suited for advertising and promotion pieces.
Univers Sans-serif	A precisely defined sans-serif face created especially for the IBM "Selectric" Composer. Its elegant simplicity of style gives a clean, clear type impression. It is a practical type face, particularly appropriate for copy used in advertising and technological literature.

Since you may not know how many lines each paragraph will have once you type it on the composer, you would not know how many extra carrier returns to enter after each heading. Therefore, instead of entering all the text in the first column (the headings) and then all the text in the second column (the paragraphs), treat each heading and paragraph as if it were a separate column project.

The procedure to enter this sort of column format is a little different than what you have done so far.

These are the steps to enter a project like this one:

- Enter the Format/Line Length code for the first column.
- Enter the Tab/Index code for the column margins.
- Enter the Column Begin code for the first column.
- Enter a Tab/Index code for the text within the columns (if it is needed).
- Enter the first column.
- Enter the Column Begin code for the next column and the text for the column. End the last column with a Required Carrier Return.
- Enter the Column End code at the end of the second (or last) column.

Repeat these steps for each of the separate column projects.

NOTE: The Tab/Index codes for the column margins and for the text within the columns *must* be reentered after a Column End code, to be sure that your final copy will always play back correctly.

In this exercise you will type the text from the example on the next page. The example shows the entry copy—the column codes are marked to show you how the job was keyed. Notice that the column margin tabs have been reentered after each Column End code.

1. Exercise setup:
 - Use a yellow font.
 - Reset.
2. Enter Flush Left, 5 picas (for the headings).
3. Enter a Tab/Index code for the column margins—single spacing, tab at 7 picas.
4. Enter a Column Begin code and the heading.
5. Enter Justify, 18½ picas (for the paragraphs).
6. Enter a Column Begin code and the paragraph that goes beside the heading. End with two Required Carrier Returns.
7. Enter a Column End code.
8. Change to Flush Left, 5 picas.
9. Repeat steps 3 through 8 for the next section of the exercise and steps 3 through 7 for the last section.
10. Play in final.
11. Clear memory.

Remember, this exercise had only column margin tabs. If the layout has tabs within the columns, be sure to reenter *both* the column margin Tab/Index code *and* the Tab/Index code for the tabs within the columns after the Column End code.

Example:

IT 64 TS

c

Press Roman
Serif

jc 64

A practical type face characterized both by its distinctive appearance and its legibility. An analysis of this type reveals that it has no pronounced thick and thin strokes. Its overall pleasing symmetry produces quality type for a variety of applications, including newsletters and brochures. RCR
RCR

e

IT 64 TS

c

Pyramid
Square Serif

jc 64

A uniquely designed face featuring a square serif. It lends itself particularly well to material requiring special emphasis. It also provides a good effect for text type and is especially suited for advertising and promotion pieces. RCR
RCR

e

IT 64 TS

c

Univers
Sans-serif

jc 64

A precisely defined sans-serif face created especially for the IBM "Selectric" Composer. Its elegant simplicity of style gives a clean, clear type impression. It is a practical type face, particularly appropriate for copy used in advertising and technological literature. RCR
RCR

e

Font Changes in Column Jobs

Font changes are entered as you learned before. As a reminder:

- Code “f” and a two-digit number = Font Change.
- Font Code Numbers 90–99 are reserved.
- Font code “99” means italics for training.

When a font change has been entered, playback of columns will stop whenever the font should be changed. Enter the font change at the beginning and end of the text.

This example shows where the Reserved Font Code Numbers should be placed.

F64 Fifteenth century Italy was bursting with vitality and vibrant with change. *The last vestiges of the medieval world were vanishing.* F99 A new age had begun called the Renaissance, or rebirth, because it seemed as if men were suddenly awakening to the wonders of this world, which the Middle Ages had regarded as merely a brief and F64 troubled preparation for the next. But starting with the Renaissance, came a spurt of progress that included Galileo’s proof in 1609 of the form of the solar system, and later in the 17th century, Sir Isaac Newton’s mathematical demonstration of an ordered universe. F99 *It was in this period that the modern world was born.* F64

1. Exercise setup:
 - Use a red font.
 - Select a red italic font for the font change.*
 - Cards for recording in the pack feed slot.
 - Reset.
 - Enter Justify, 16½ picas.
 - Enter the Tab/Index code for single spacing, with a column margin tab at 18.
2. Enter a Column Begin code and the first column.
 - Remember to enter the Reserved Font Code Numbers where they are marked.
 - Do not carrier return after you enter the Font Code Number.
3. Repeat step 2 for the second column.
4. Enter a Column End code.
5. Play back in final.
 - Change the font when “Font Change” blinks.
6. Clear memory.

*If you do not have a red italic font, you may use any other red font.

Escapement Changes in Column Format

Stop codes are normally entered directly before and after the headings that have escapement changes. In column format, Stop codes should *also* be entered at the beginning and end of *each* line when the change affects two or more lines.

```
jT          64  tS
c
SC;TITLE IN RED; SC
SC;ESCAPEMENT; SC

c
The text is in yellowescapement.
A Stop code is entered to stop
playback in Final.
c
In column format, enter Stop
codes at the beginning and end of
the lines.
e
```

Remember, in column format a line from each column prints across the page before the carrier returns to the left margin.

If a Stop code is not entered at the end of the column line, playback will not stop before printing the next column. Each line that prints before the carrier returns will be in the wrong escapement.

Also, if the Stop code is not entered at the beginning of the line, playback might not stop for escapement changes.

- Escapement changes should be made only at the beginning of lines.

Scanning does not stop at Font Code Number changes. Reserved Font Code Numbers should not be used for escapement changes.

Additional Information on Placement of Column Codes

You have completed two kinds of column work—one where you typed the column codes as you typed the material, and one where you inserted them into material that had already been typed and recorded.

When you are inserting column codes into previously typed text, extra carrier returns (blank lines) in the project may affect where you place the column code. The information and example below provide some suggestions.

Columns usually begin with text lines. If the line where the column should begin is a blank line, the column code should be placed at the beginning of the next text line.

- Entering a column code before a blank line causes the first line of that column to be blank.
- Blank lines are counted when they appear in the middle of the number of lines needed for the column. For example, if the column should be six lines each and the fourth line is a blank line, the blank line should be counted.

Example: Placing Column Begin codes

Nineteen lines of copy divided by three columns equals six lines in each column with a remainder of one line.

Incorrect Placement

first column	1	Recognizing the need to conserve man-hours	1
	2	and cut costs, an Executive Order directs department and agency heads to give increased attention	2
	3	to government economy and effectiveness through	3
	4	Management Improvement Programs. The Department of the Navy, in enthusiastic support of this	4
	5		5
	6		6
second column	1	objective, initiated and conducts a Paperwork Management Program. Paperwork, which includes	1
	2	all means of recording information for transmission or subsequent retrieval, is most important and	2
	3	necessary to the proper functioning of every ship and shore station.	3
	4		4
	5		5
	6		6
third column: incorrect, will begin with a blank line	1		7
	2	As the principal medium through which	1
	3	missions, plans, and programs are carried out, it must be kept streamlined. Active participation in	2
	4	the Paperwork Management Program by all hands	3
	5	will insure the achievement of effective and streamlined paperwork operations by the end of 1975.	4
	6		5

Correct Placement

first column

second column actually has 7 lines, but the last one is blank

third column is now correct

Column Format:

- Produced by placing a Column Begin code (code “c”) at the beginning of each column.
- Ended by placing a Column End code (code “e”) at the end of the last column.

Tabs in Column Format:

- Column margin tabs.
 - Entered before the first Column Begin code.
 - Show where each column is to start printing.
- Tabs within text.
 - Entered after the first Column Begin code, or as needed in the text.
 - Entered at the left margin. They are “moved” over when the columns move.

Placing Column Begin Codes:

- May be entered while typing the project.
- May be entered after the project is typed, by using scan.
 - Scan all the lines in memory.
 - Divide the number of lines by the number of columns (gives you lines per column).
 - Page start and play back the Format/Line Length code and Tab/Index code.
 - Enter the first Column Begin code.
 - Scan to the number of lines per column.
 - Enter the next Column Begin code.
 - Enter a Column End code at the end of text.
- If entered before a blank carrier return, the first line of that column will be blank.

Formatting in Columns:

- May be of different widths.
- May be both single and double spaced.
- May be of different formats.
- May contain Font Code Number changes or Stop codes.

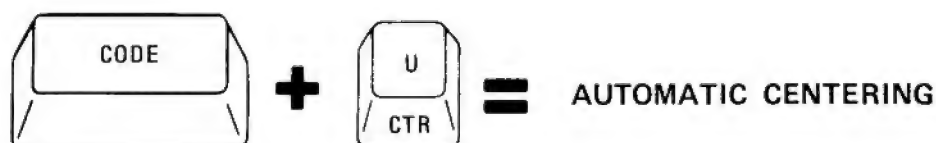
Escapement Changes in Columns:

- May be made for entire lines only.
- Must have a Stop code at the beginning and end of each line.

STATISTICAL AND TABULAR WORK

Automatic Centering

You have learned to center by placing Space Position codes on both sides of the text. The IBM Mag Card Composer also has an Automatic Centering feature. When you use Automatic Centering, the lines print centered on your entry copy as well as on your final copy. You will find Automatic Centering very helpful in placing headings over columns.



These are the basic steps for Automatic Centering:

- Move to the center point.
 - You may tab, space, Backspace-6, or any combination of these.
- Enter a Center instruction (code "u").
- Type the material to be centered.
 - As you type, nothing prints. Instead, the carrier thumps once for every character you key.
- Carrier return to print the centered line.

1. Exercise setup:

- Use a yellow font with leading on 18.
- Reset.
- Enter Flush Left, 14 picas.
- Enter a Tab/Index code for single spacing, tab at 7 picas (the center point).

2. Enter the centered lines below.

- If you make an error, look at the steps for error correction. They are listed on the next page.

AGENCY CONTRACT

between

HERBERT A. BROWN

and

ALEXANDER J. STEPHENSON

3. Play back in final.

4. Clear memory.

Errors in Automatic Centering

You made an error while typing the centered material:

- Backspace once.
 - All the characters you typed are erased.
 - The Center instruction is still in effect.
- Retype the correct text.

You noticed an error after the centered material printed:

- Line return, line delete, retype.
 - If you have several headings on the same line which have been centered correctly, you may want to play back through those before you line delete.

You keyed a Center instruction accidentally:

- Carrier return, line return, line delete.
 - If you have other headings or text on the line which is correct you may wish to line return, play back through the correct material, and then line delete.

There are ways of making centered material print in addition to the carrier return you used in the exercise. If you were typing several centered headings on a line, you would not want to carrier return after every one of them.

All of the following will cause centered material to print:

- Carrier Return.
- Required Carrier Return.
- Index.
- Zero Index Carrier Return.
- Tab.
- Required Tab.
- Backspace-6.
- Backspace-1.
- Page End.
- Decimal Tab (this is taught next in this section).

When you are tabbing or spacing to reach the center point, you may use regular or Required Tabs, regular spaces or Space-3 and Space-1 codes, or Backspace-6 and Backspace-1 codes in any combination. However, if you have a tab followed by only *one* Backspace-1 code, you cannot enter the Center instruction. The combination of a tab followed by only one Backspace-1 code is the signal for another automatic function—Decimal Tab—which is taught in this section.

Stop Codes and Font Codes in Automatic Centering

If a Stop code or Font code is necessary in an Automatic Centering project (for an italicized or bold-face word), follow these guidelines to be sure your playback will be correct:

- Enter the Stop or Font code at the beginning of the line if all the centered material on the line is affected by it.
- If only portions of the line are affected by the Stop or Font code, place it this way;
 - Enter the tab, spaces and/or coded backspaces to reach the center point.
 - Enter the Center instruction.
 - Enter the Stop or Font code.
 - Enter the material to be centered.
 - Enter another Stop or Font code if you need it after the centered material.
 - Carrier return, tab, or code backspace to print the centered heading.

When the heading prints it will not stop for the Stop or Font codes you entered. However, final playback, entry playback, or scanning will stop for them.

Automatic Centering Compared to Centering with Space Position Codes

Automatic Centering centers your text around a certain point. If you change the line length of your project you must also adjust the centering point to keep your headings in the center of the line.

Centering with Space Position codes places your heading in the center of the line, and automatically adjusts if you change the line length.

With Automatic Centering the headings are centered on your entry copy as well as final. With Space Position codes they appear centered on final copy only.

Decimal Tab

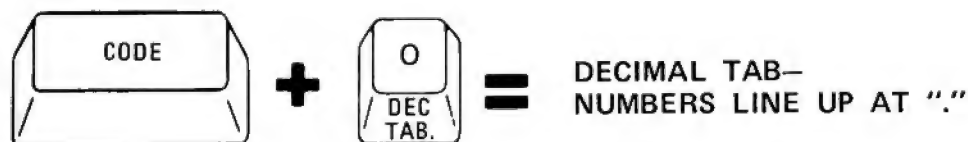
The IBM Mag Card Composer has another automatic function which helps you position statistical text quickly—Decimal Tab.

Decimal Tab produces entry copy that is formatted like your final copy, and makes proofreading easier.

This section will take you through a number of exercises to show how Decimal Tab can be used.

Decimal Tab works very much like Automatic Centering. The steps below are general ones for Decimal Tab. Additional information will be provided with the exercises.

- Set tabs where the decimal points are to line up.
- Enter Decimal Tab (code “o”). The carrier moves to the tab stop.
 - The “p” is also a form of Decimal Tab. It is used to line up with commas, rather than decimal points. In this section “Decimal Tab” means the “o” key.
- Type the number. The carrier thumps but does not print as you are typing.
- Decimal Tab to the next column. At this time your typing prints. Carrier returning at the end of the line will also cause typing to print.



1. Exercise setup:

- Use a red font.
- Reset.
- Enter Flush Left, 24 picas.
- Enter a Tab/Index code for single spacing with tabs at 10 and 18 (these tabs are for the decimal points).

2. Type the numbers below using Decimal Tab.

- If you make a mistake, look at the steps to correct errors in D/T, which are on the next page.

	TAB		TAB
	↓		↓
1,222.33		3,333.22	
44,444.44		22.22	
.55		555,555.55	

3. Play back in final.

4. Clear memory.

Errors in Decimal Tab

- You made an error while typing the number:
 - Backspace once.
 - All the characters you typed are erased.
 - The Decimal Tab instruction is still in effect.
 - Retype the correct characters.
- You noticed an error after the number printed:
 - Carrier return, line return, line delete and retype the line.
- You keyed a Decimal Tab instruction by mistake:
 - Carrier return, line return, line delete, and retype the line.

You can use Decimal Tab to type numbers, even if they do not have decimal points. Set the tab where the decimal point would be if it were there, and follow the same procedures.

1. Exercise setup:
 - Use a red font.
 - Reset.
 - Enter Flush Left, 30 picas.
 - Enter a Tab/Index code for single spacing, tabs at 10, 20 and 30.
2. Enter the following numbers using Decimal Tab.

444
↓
3,333,333

444
↓
5,555

666
↓
22

3. Play back in final and clear memory.

If the number you want to type contains a decimal point, but that is not the point where the number is to line up, type a code “.” instead of a regular decimal point.

Example:

Form Number	
	A22.77
	CC3.666
	R453.3

↑ numbers should line up here

Typed with regular “.”	Typed with coded “.”
A22.77	A22.77
CC3.666	CC3.666
R453.3	R453.3

You will have to use code “.” when the last column contains decimal points and must line up exactly at the line length. If you set the tab at the line length and code the “.” you can line up exactly at the line length.

1. Exercise setup:

- Use a red font.
 - Reset.
 - Enter Flush Left, 30 picas.
 - Enter a Tab/Index code for single spacing, with tabs at 10 and 20 (for the decimal points) and 30 (the line length).
2. Enter the numbers below using Decimal Tab. Enter the first two columns normally and code the “.” for the third column.

<i>TAB</i> ↓ 77,777.33	<i>TAB</i> ↓ 8,999.04	<i>TAB</i> ↓ A22.77
2,555.44	44,333.32	CC3.666

3. Play back in final and clear memory.

When used in a Decimal Tab instruction, the coded “.” does not produce dot leaders.

The coded “.” in a Decimal Tab instruction does not show as a “.” in verify print.

Statistical and tabular work is done in two steps—setting up for the table and entering the text.

In order to decide where to set tabs when typing a table, you should enter a setup line. A setup line consists of the longest line from each column separated by Space Position codes (code Space Bar). When the line is played in final the composer will automatically space the columns equally across the line. Then you can see where to set tabs.

Example:

105,698.02	4,485.28	11,027.58
493.67	2,959.31	8,438.62
114,252.11	90,414.69	114,903.54

Setup line

1105,698.02 90,414.69 114,903.54

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- Exercise setup:
 - Use a red font.
 - Reset.
 - Enter Flush Left, 27 picas.
 - Enter a setup line for the example above as follows:
 - Enter the longest line from the first column, a Space Position code, the longest line from the second column, a Space Position code, and the longest line from the third column.
 - Carrier return.
 - Page start.
 - Play the line in final.
- Follow these steps to remove the setup line from memory. (Now that it has printed you do not need it in memory.)
 - Page start.
 - Depress ENTRY.
 - Depress CHAR/STOP to play back the Format/Line Length code.
 - Line delete to remove the setup line.
- Enter the Tab/Index code for the table. Set tabs for the decimal points for the first two columns. Set the third tab at the line length (the last column will line up exactly at the line length).
- Enter the table, using the procedures for Decimal Tab that you just learned.
 - Remember to use a coded "." for the decimal in the last column.
- Play back in final.
- Clear memory.

Aligning Numbers With Dollar Signs

Example:

\$ 8,596.45
34,900.59
566.00

\$ 101.55
34.90
3,895.00

\$ 4,934.35
23,854.00
305.75

When setting up for a table like this, remember that the longest line in each column can be a combination of the dollar sign and the longest number.

\$34,900.59 \$3,895.00 \$23,854.00

64

1. Exercise setup:
 - Use a red font.
 - Reset.
 - Enter Flush Left, 28 picas.
2. Enter the setup line for the table in the example.
3. Play the setup line in final.
4. Play back the Format/Line Length code and delete the setup line.
5. Enter a Tab/Index code for the table. Set tabs for the decimal points in columns one and two; set the third tab at the line length.
6. Do not enter the table yet. Continue reading.

When you enter this table, notice that the dollar signs are not with the longest number in each column. You must enter spaces to be sure that the dollar sign will be placed properly.

The dollar sign and the numbers are each equal to two spaces. The comma is equal to one space.

\$ 10.00
100.00

\$ 10.00
1,000.00

7. Enter the table in the example.
 - Remember to enter spaces between the dollar sign and the number so that the dollar sign will line up properly.
 - Do not enter spaces unless you need to line up the dollar sign and the number.
8. Play back in final.
9. Clear memory.

Mixed Alphabetic and Numeric Columns

Example:

Columbus in America	\$ 3.00	Single	14-716
Bessie, the Monkey	12.95	Tape	5-611
Bible Lessons	115.00	Album	363-522
Learning to Spell	27.00	Tape	5-082

You can use Decimal Tab for this table, even though there are columns of text as well as numbers.

Remember, when you have a column of alphabetic text (like the third column in the example) the tab should be set at the beginning of the column.

Columbus in America	\$115.00	Single	363-522
---------------------	----------	--------	---------

1. Exercise setup:
 - Use a red font.
 - Reset.
 - Enter Flush Left, 28 picas.
2. Enter the setup line for the table, play back in final, and remove it from memory.
3. Enter a Tab/Index code for the table, and set the tabs where indicated by the setup line.
4. Do not enter the table yet. Continue reading.

For this exercise the first and third columns are not typed with Decimal Tab, but the second and fourth are.

Type the first column at the left margin, then Decimal Tab to the second. Use a regular tab to move to the third column; a regular tab will also make the number print. Use a Decimal Tab to move to the fourth column.

Columbus in America	\$ 3.00	Single	14-716
---------------------	---------	--------	--------

5. Enter the table in the example.
6. Play back in final.
7. Clear memory.

SUMMARY

Automatic Centering:

- Entered by code “u”.
- The carrier thumps as you type.
- The material prints when you carrier return, tab, or code backspace.

Errors in Automatic Centering:

- Before the material prints;
 - Backspace once.
 - The Center instruction is still in effect.
 - Retype.
- After the material prints;
 - Line return.
 - Line delete.
 - Retype (you must enter code “u” again).

Decimal Tab:

- Entered by code “o”.
- The carrier thumps as you type.
- The material prints when you carrier return, tab, or Decimal Tab.
- A coded “.” will not align.

Errors in Decimal Tab:

- Before the number prints;
 - Backspace once.
 - The Decimal Tab instruction is still in effect.
 - Retype.
- After the number prints;
 - Line return.
 - Line delete.
 - Retype.

Setting Up for a Table:

- Type the longest number from each column with a Space Position code between each number.
- Play the line in final.
- Remove the line from memory.

Aligning Numbers With Dollar Signs:

- If the dollar sign is not with the longest number, enter spaces between the dollar sign and the number (\$ 2.34).
- Each number equals two spaces.
- Each comma and period equals one space.

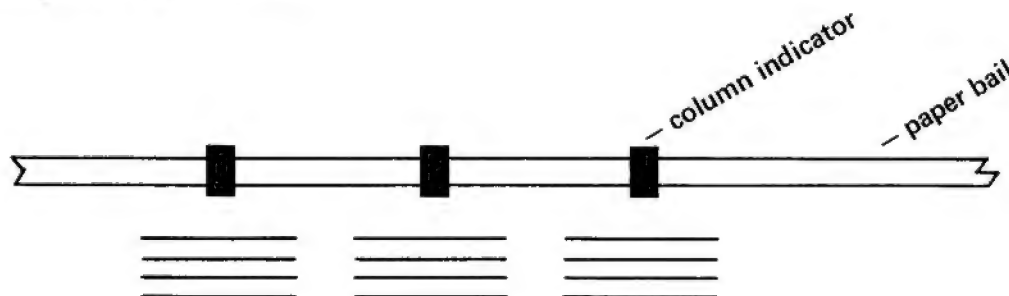
SUMMARY

Centered Headings Smaller Than Columns

Example:

City	1950	1955	1960
Cedar Rapids	\$ 94,976.44	\$ 99,785.33	\$ 209,354.66
Des Moines	507,562.04	912,566.87	1,934,598.90

The column indicators on the paper bail are an aid for you when centering over columns. For Automatic Centering they are used to mark the center point of the column.



1. Exercise setup:
 - Use a red font.
 - Reset.
 - Enter Flush Left, 33 picas.
2. Enter the setup line for the example, play back in final, and delete it from memory.
3. Enter a Tab/Index code and set tabs for the columns.
4. Move the column indicators so that one marks the center of each column.
Hint: Roll your paper up so the setup line is close to the column indicators.

The steps for centering headings over columns are the same as centering over the entire line: move to the center point, enter the Center instruction (code "u") and type the heading. When you tab to the next column, the heading will print.

5. Center the headings for the example.
 - For the first heading, space in to the center.
 - Enter code "u", type the heading and tab.
 - You may use Space-3 and Space-1 codes to reach the center point.
 - For the second and third headings, use coded backspaces to the center, code "u", type the heading and tab.
 - Enter the fourth heading like the second and third, but end with a carrier return instead of a tab.
6. Enter the rest of the table in the usual manner.
7. Play back in final and clear memory.

Centered Headings Larger Than Columns

Example:

Number of Air Shipments	Number of Rail Shipments	Number of Truck Shipments
80,380 2,734,336	5,887,889 3,223,255	40,501,179 222,166,333

Setting up for a table like this has two parts. First, enter a setup line for the longest line of each heading.

1. Exercise setup:
 - Use a red font.
 - Reset.
 - Enter Flush Left, 38 picas.
2. Enter the setup line for the headings and play it back in final.
3. Move the column indicators to mark the center of each heading.
 - Do not set tabs yet.

When the placement for the headings has been established, the columns are placed by centering them under the headings. Then you can tell where to set tabs for the columns.

4. With ENTRY down, space to the center of the first heading.
 - You may have to use Space-3 and Space-1 codes.
5. Using Automatic Centering, center the longest line from the column under the heading.
End the number with a Backspace-6 code to make it print.
6. Repeat steps 4 and 5 for the other columns.
7. Page start.
8. Play back the Format/Line Length code.
9. Line delete until all the setup lines are deleted.
10. Enter the Tab/Index code for the columns.

The headings and the table are entered as you did for the previous exercise.

11. Enter the table from the example.
12. Play back in final.
13. Clear memory.

Some tables may have a combination of headings that are longer and shorter than the columns, as in the example below:

Example:

School	Full-Time Enrollment	Tuition	Degrees Conferred
Eastern State College	8,765	\$132	1,432
Holy Mount University	19,640	130	900

The setup line for this table will include the longest lines, whether from the columns or from the headings.

| Holy Mount University | Enrollment | Tuition | Conferred

64

The column indicators are placed at the center of each of the portions of the setup line. Tabs are set for the columns using the procedures from the last two exercises, and the table is entered in the usual manner.

1. Exercise setup:
 - Use any red font.
 - Reset.
 - Enter Flush Left, 38 picas.
2. Set up for the table, using the procedures you learned in the last two exercises.
3. Enter the table in the example.
4. Play back in final and clear memory.

Exact Placement of Column Indicators

When you enter the setup line and position the column indicators for the center points, you may find that after you set the tabs the column indicators are not exactly centered.

After you set the tabs you may wish to adjust the column indicators by the same amount that the actual tab differs from the setup line.

Stacked Headings

Centered headings can be “stacked” over more than one column by using the column indicators as guides, and using Automatic Centering.

Example:

WEEK OF JUNE 21-28				
	ENGINEERING		PRODUCTION	
	BUDGET	ACTUAL	BUDGET	ACTUAL
Models 837 & 929	\$1,000	\$4,987	\$4,299	\$5,800
Cutting Equipment	766	487	400	455

The part of the example below the dashed line is just like the other heading exercises you have done where the heading is larger than the column. By using the column indicators a little differently you can easily place stacked headings over the columns. Position a blue indicator for the column center, and a red one for the center point of the stacked heading.

1. Exercise setup:
 - Use a red font.
 - Reset.
 - Enter Flush Left, 30 picas.
2. Enter the setup line using the regular procedure.
 - Use only those headings that are centered over one column.
 - Do not use any of the headings that are stacked and centered over more than one column.
3. Position a blue column indicator at the center point of each column.
 - To position a blue indicator at each center point, you will need to slide a red one over as well.
4. Center the red column indicators between the blue ones.
 - You may wish to use one of the scales on your Graphics Scale to measure the size of the setup line entries. This will help you determine the center point.

Notice that in this exercise the columns are all smaller than the headings. To determine where the tabs should be set, move the carrier to the center point of the heading (the blue indicator) and center the longest line in the column under the heading.

5. Set the tabs for the columns.

Entering stacked headings is just like entering regular headings:

- Move to the center point.
- Enter a Center instruction and type the heading.
- Print the heading.

Your column indicators will show the center points of all your headings.

The diagram illustrates the column indicators for the table below. Red boxes on a horizontal line represent the center points of the headings. Arrows point from these boxes to the corresponding headings in the table. The sequence of indicators is BLUE, RED, BLUE, RED, BLUE, RED, BLUE.

	ENGINEERING		PRODUCTION	
	BUDGET	ACTUAL	BUDGET	ACTUAL
Models 837 & 929	\$1,000	\$4,987	\$4,299	\$5,800
Cutting Equipment	766	487	400	455

6. Enter the headings.
7. Enter the rest of the table.
8. Play back in final and clear memory.

Centered Text Within a Column

Some jobs will have text centered in a column that may be larger or smaller than the basic columns. This text is entered just as if it were a centered heading.

Example:

Accountancy	\$12,796.31	\$4,934.05	\$ 5,510.96
Adult Education Workshop	25,044.95	Not Available	14,538.30
Allied Health Program	Not Available	300.00	1,000.00
Total	59%	9%	32%

When entering the setup line, use the longest line from each basic column. Do not use the centered material, even though it may be longer than the basic column.

1. Exercise setup:
 - Use a yellow font.
 - Reset.
 - Enter Flush Left, 36 picas.
2. Enter the setup line for the table.
3. Set tabs for the columns.
4. Place a column indicator at the center of each column.
5. Enter the table using the same procedures you have followed for the other exercises.
 - When you reach a column with centered material, follow the usual procedures for Automatic Centering.
6. Play back in final.
7. Clear memory.

If the last column in the table contains centered material that is longer than the column, *do* include the centered material in the setup line. Then center the column under it, and set the tabs for all the columns.

SUMMARY

Centered Headings Smaller Than the Columns:

- Enter the setup line, play it back in final and delete it.
- Place a column indicator for the center of each column.
- Set tabs for the table.
- Tab and/or space to the center point.
- Code “u” and type the heading.

Centered Headings Larger Than the Columns:

- Enter the setup line and play it back in final. Use the longest line from each heading.
- Place a column indicator at the center of each heading.
- With ENTRY down, space to the column indicator.
- Center the longest line from the column. Print the number with a Backspace-6 code.
- Delete the setup lines.
- Set tabs for the columns.
- To enter the headings, space and/or tab to the center points and center the headings.
- To enter the columns, Decimal Tab to the tabs and type the numbers.

Headings That are Both Smaller and Larger Than the Columns:

- For the setup line, select the longest line—either the heading or the column.
- Enter the setup line and play it back in final.
- Place a column indicator at the center of each portion of the setup line.
- With ENTRY down, space to the column indicator for the heading that is larger than the column.
- Center the longest line from the column.
- Delete the setup lines.
- Set tabs for the columns.
- Enter the headings with Automatic Centering.
- Enter the columns with Decimal Tab.

Stacked Headings:

- Enter the setup line as for a regular table.
- Place a blue column indicator over the center of each portion of the setup line.
- Place a red indicator centered between the blue ones.
- Use the blue indicators to center the row of headings over the columns.
- Use the red and blue indicators as needed for the center points of the stacked headings.
- Set the tabs and enter the headings and columns in the same manner as regular tables.

SUMMARY

SUMMARY

Centered Text Within Columns:

- Use the longest line from each column (but not the centered material) for the setup line.
- Place a column indicator for the center of each column.
- Enter the table using Decimal Tab.
- Enter the centered material using Automatic Centering.
- *Exception:* If the centered material is in the last column, and is larger than the longest number in the column, use it in the setup line. Follow the steps for headings larger than columns to see where to set the tab for the last column.

SUMMARY

Dot Leaders in the Middle of a Column

Example:

R. A. Williams.	President	1950	41,500 Common
John C. Simple	Vice President	1959	1,500 Common
Garrison P. Brothers.	Secretary	1947	20,050 Common
M. M. Miller, Jr.	Treasurer	1962	100 Common

Because the first column in this table contains dot leaders, select the longest line from each side of the column to use in the setup line.

The longest lines are circled below.

R. A. Williams.	President	1950	41,500 Common
John C. Simple	Vice President	1959	1,500 Common
Garrison P. Brothers.	Secretary	1947	20,050 Common

When you enter the setup line:

- First column.
 - Enter the longest line from the left side of the column, a Dot Leader code, and the longest line from the right side.
- Second column.
 - Enter normally.
- Third column (numbers followed by words).
 - Treat the word as part of the number.

| Garrison P. Brothers Vice President 1950 41,500 Common

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1. Exercise setup:

- Use a yellow font.
 - Reset.
 - Enter Flush Left, 29½ picas.
2. Enter the setup line for the table.
3. Do not set tabs yet. Continue reading the manual.

When a column contains dot leaders you must “tell” the composer where to end the column. Your Tab/Index code will have a tab for the end of the column to show how much space the dot leaders should fill.

When all the numbers in a column are the same length, as in the second column, you may set a tab at the beginning of the column and type the numbers as if they were flush left. You may also set the tab at the end of the column and use Decimal Tab. For this exercise, set the tab at the beginning of the column.

Words can be positioned using Decimal Tab. Since the third column in this exercise has words that are all the same, you can combine the words with the numbers and enter the whole column with Decimal Tab. For the third column, set the tab for the end of the word “Common.”

Garrison P. Brothers. Vice President 1950 41,500 Common

Handwritten red arrows point to the end of each column with the label "TAB".

4. Enter the Tab/Index code for the table.
5. Continue reading the manual.

When you enter the text for the first column, end it with a tab, and *then a space*. The next column begins with a tab, and if the composer finds two tabs together, it will extend the dot leadered column all the way to the beginning of the second column.

Garrison P. Brothers. Vice President1950 41,500 Common

Handwritten red arrow points to the missing space between "President" and "1950" with the label "wrong: two tabs together".

Garrison P. Brothers. Vice President 1950 41,500 Common

Handwritten red arrow points to the space between "President" and "1950" with the label "right: tab-space-tab".

To enter the second column, tab and type.

Enter the third column with a Decimal Tab instruction.

6. Enter the table in the example.
7. Play back in final, and clear memory.

Dot Leaders Extending Across a Column

Dot leaders are often extended across an entire column width. The dot leaders can make up an entire column (as in column three) or extend across a line of a column (as in columns two and four).

Example:

Adams	\$ 1,977	.....	\$ 3,720
Blanchard	13,886	.....	.....
Cole	.....	.....	12,465

In the setup line for this table, enter a number equal to the width of the third column. Since columns two and four both have a dollar sign, five numbers and a comma, enter a number like \$22,222 for the third column in the setup line.

lBlanchard\$13,886\$22,222\$12,465

64

You do not want to enter just a Dot Leader code for the third column because the dots would be wider than the other two columns. This is because the Dot Leader code functions just like a Space Position code except that it fills the space with dots.

1. Exercise setup:
 - Use a yellow font.
 - Reset.
 - Enter Flush Left, 30 picas.
2. Enter the setup line for the table.
3. Set tabs as indicated in the example below.
4. Position a column indicator for the beginning of each column which will contain dots.

Blanchard ↑\$13,886 ↓TAB ↑\$22,222 ↓TAB ↑\$12,465 ↓TAB
 column column column
 indicator indicator indicator

If the columns have decimal points, set the tab for the end of the column and code “.” for the decimal point.

Adams	\$ 1,977	.....	\$ 3,720
Blanchard	13,886	.....	.....
Cole	.....	.....	12,465

5. Enter the table. Follow these steps for the columns with dot leaders:

- Tab to the end of the column.
- Backspace (using Backspace-6 and Backspace-1 codes) to the beginning of the column.* Use the column indicator to check your position.
- Enter a Dot Leader code, tab to the end of that column, and then space. (If the dots are in the last column, you need not space after the tab.)

6. Play back in final and clear memory.

The numbers in this example do not contain decimal points. If your table does contain decimal points, set tabs for the *end* of the number, not the decimal point. When you enter the number, use a code “.” for the decimal.

*You may also space to the beginning of the column to enter the Dot Leader code. For this exercise it is faster to tab to the end of the column and then backspace.

Flush Right/Left Columns

Frequently, a table has columns that have both flush right and flush left material in the same column.

The example below shows the points where the flush right and left material join.

Example:

New York	c-Albany	406(a)	216
New York	New York	112,213(b)	1,709
Oklahoma	c-Oklahoma City	726	15½
Oklahoma	Tulsa	74	382
Washington	c-Olympia	298	79½

The setup line for this table may be a combination of flush right material from one line and flush left material from another line in the same column, such as in column four.

New York	New York	112,213(b)	1,709
Oklahoma	c-Oklahoma City	726	15½
Washington	c-Olympia	298	79½

1. Exercise setup:

- Use a red font.
- Reset.
- Enter Flush Left, 31 picas.

2. Enter the setup line for the table.

3. Set tabs at the points where the flush right and flush left material join.

Washington	TAB ↓ c-Oklahoma City	TAB ↓ 112,213(b)	TAB ↓ 1,709½
------------	-----------------------------	------------------------	--------------------

Up to now, you have used a carrier return, another Decimal Tab, or a regular tab to make your columns print. There are two additional ways to make a Decimal Tab column print—Backspace-6 code and Backspace-1 code.

When you use either of these backspace codes, the column prints and the carrier backs up either one or six units.

If you space forward one unit (Space-1) or six units (two Space-3) you have repositioned the carrier exactly at the end of the column.

Look again at the example of flush right joining flush left.

Example:

New York	c-Albany	406(a)	216
New York	New York	112,213(b)	1,709
Oklahoma	c-Oklahoma City	726	15½
Oklahoma	Tulsa	74	382
Washington	c-Olympia	298	79½

To enter this kind of table, use the following steps:

- Type the first column.
- Look at the next column.
 - If there is anything before the tab, Decimal Tab to the tab stop, type the material before the tab, and print it using a Backspace-1. Enter a Space-1 and type the rest of the column.
 - If there is nothing before the tab, just tab and type.

Repeat the second step for each of the columns that contain both types of material.

4. Enter the table.

- If the keyboard locks when you try to enter the "½" in the last column, look at the steps below the exercise.

5. Play back in final, and clear memory.

If the keyboard locks while entering the last column, your tab is too close to the line length.

- Page start.
- Play back the Format/Line Length code.
- Delete the Tab/Index code and enter a new one with the last tab one-half pica farther to the left.
- Play back to the point where the keyboard locked.
- Continue entering text.

Separated Flush Right/Left Columns

Flush right/left columns may have the flush right text separated from the flush left text by a space, as in the last column of the example.

Example:

R. A. Williams	President	41,000 Blue Chip
John C. Simple	Vice President	102,000 Preferred
M. M. Miller, Jr.	Secretary	3,000 Common

In the setup line, enter the longest line from the flush right side of the column, a space and then the longest line from the flush left side of the column.

I M. M. Miller, Jr.	Vice President	102,000 Blue Chip	64
M. M. Miller, Jr.	Vice President	102,000 Blue Chip	

Use Decimal Tab to type the flush right side of the last column. Use a Backspace-1 code to make it print, and then a Space-1 code to reposition the carrier at the end of the number. Space once and then type the flush left side of the column.

1. Exercise setup:
 - Use a red font.
 - Reset.
 - Enter Flush Left, 30 picas.
2. Enter the setup line for the table.
3. Set the tabs and enter the table.
4. Play back in final and clear memory.

The procedures you have followed in the last two exercises can be used when you have columns with some numbers in parentheses.

Example:

1,234
(9,467)
444
(598)

Set the tab where the arrow indicates. Use the Backspace-1 to print the Decimal Tab, and the Space-1 to reposition the carrier. Type the closing parenthesis.

SUMMARY

Columns With Dot Leaders:

- For the setup line, enter the Dot Leader code as part of the column.
- Set a tab for the end of the column with dot leaders.
- Enter the column text, the Dot Leader code, tab to the end of the column, *and then space once*.
- Enter the next column.

Dot Leaders Extending Across a Column:

- Place a column indicator at the beginning of the column.
- Set a tab at the end of the column.
 - If the numbers contain decimal points, set the tab at the end of the column and code “.” for the decimal.
- Space or code backspace to the beginning of the column.
- Type the Dot Leader code, tab to the end of the column, *and then space once*.

Columns That Combine Flush Right and Flush Left:

- Set a tab for the point where the flush right and left material join.
- Use Decimal Tab to type material before the tab. Print it with a Backspace-1 code.
- Enter a Space-1, and type the material after the tab.
- If there is nothing before the tab, just tab and type.

SUMMARY

Varying Space Between Columns

Up to this point the spaces between the columns have all been equal. Occasionally, tables have columns where the spaces between the columns vary.

Example:

CIVILIAN LABOR FORCE				
Employed	29,806	27,807	40.7	41.6
Unemployed	1,428	1,239	42.7	42.7

To vary the space between the columns, enter multiple Space Position codes in the setup line where extra space is needed.

I Unemployed 29,806 27,807 40.7 41.6

64

The tabs are set according to the setup line indication and the table is entered using the regular procedures.

1. Exercise setup:
 - Use a red font.
 - Reset.
 - Enter Flush Left, 33 picas.
2. Enter the setup line with the number of Space Position codes shown in the setup line above.
3. Enter the table.
4. Play back in final and clear memory.

Tables Centered Under Text

Notice that in the example below the table is centered under the text.

Example:

STUDENT JOB INTERVIEWS

The following schedule lists each student to be interviewed the afternoon of October 25. If you will not be able to meet at the time specified, please notify the Placement Office.

STUDENT	TIME	COMPANY
Robert Carlson	1:45	Ace Liability Finance
Joe Haley, Jr.	2:00	Slowing Airline
Francis Hill	2:15	Mill Electronics

To enter the setup line, you would enter a Space Position code at the *beginning* of the setup line and after each column *including* the last.

j Robert Carlson TIME Ace Liability Finance

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The Space Position codes at the beginning and end of the setup line put the same amount of space before and after the table as there is between the columns. If you want more space before and after the table, enter multiple Space Position codes.

When setting tabs for this project, there are two things to remember:

- Set a tab at the beginning of the first column since it does not start at the margin.
- If tabs are needed for paragraphs in the text, set them also.

1. Exercise setup:
 - Use a red font.
 - Reset.
 - Enter Justify, 33 picas.
2. Enter the setup line.
3. Enter the Tab/Index code. Set a tab at 2 picas for the paragraph and tabs for the columns, and place column indicators at the center points of the columns.
4. Enter the justified paragraph.
5. Change to Flush Left, 33 picas and enter the table.
6. Play back in final and clear memory.

If you do not set tabs for the table at the beginning of the project, end the text paragraph with a Required Carrier Return, and enter a Tab/Index code for the table.

Roman Numerals

Roman numerals are also entered with Decimal Tab.

Follow the same rules for setting up and entering as in regular Decimal Tab.

Example:

TAB
↓
I.
II.
III.
IV.

Roman numerals combined with indented text:

Example:

TAB TAB
↓ ↓
I. _____

II. _____

III. _____

- Enter the Roman numeral using Decimal Tab.
- Print it with a Zero Index Carrier Return (code INDEX).
- Enter the indented material following normal procedures.

Exact Alignment of Tabular Material

Tabs cannot always be set at the exact point indicated by the setup line. Usually if they are set as close as possible to the setup line the spacing is acceptable. However, due to tight space requirements, it is sometimes necessary for the columns to be exactly where the setup line indicates. In these cases, Exact Spacing codes are used for exact alignment.

Example:



Connecticut	CT	1,709	Hartford
Florida	FL	615	Tallahassee
Georgia	GA	95	Atlanta

1. Exercise setup:
 - Use a yellow font.
 - Reset.
 - Enter Flush Left, 14 picas.
2. Enter the setup line.
3. Enter a Tab/Index code. Set tabs as close as possible *before* flush left columns (text) and *after* flush right columns (numbers).
4. Continue reading the manual.

Before entering the table, you must find out how many Exact Spacing codes are necessary. This is done with ENTRY up, so no extra spaces go into memory.

With ENTRY up, roll up the paper so the short line on the cardholder lines up with the setup line.

For flush left columns:

- Tab to the tab stop for the beginning of the column.
- Use Space-3 and Space-1 codes to move to the beginning of the column.
- Write down the number of units needed to move from the tab stop to the column.

For flush right columns:

- Tab to the tab stop at the end of the column.
- Use Backspace-6 and Backspace-1 codes to move to the end of the column.
- Write down the number of units needed to move from the tab stop to the end of the column.



Connecticut	GA	1,709	Tallahassee
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Entering a Table With Exact Spacing

For exact alignment of flush left columns:

- Tab to the beginning of the column.
- Enter the number of Exact Spacing codes you decided were necessary during setup.
- Enter the column.

For exact alignment of flush right (Decimal Tab) columns:

- Decimal Tab to the tab stop for the column.
- Enter the text. If the number contains a decimal point, be sure to *code* the “.”
- Enter Space-3 and Space-1 codes equal to the number of units you backspaced in setting up to determine exact alignment. (The backspaces are only for setting up. You must use spaces when entering the table.)
- Enter the next column or carrier return.

5. Enter the table.

- Use Exact Spacing codes for alignment.

6. Play back in final and clear memory.

Centered Headings in a Larger Escapement

Normally headings should stand out from the columns. This can be accomplished by typing the headings in all caps or by using a bold font for the headings and a medium font for the columns (both in the same escapement). Some formats, however, require that the headings be in a larger escapement than the columns.

Example:

Invoice Number	Name	Amount
4563	V. E. Travis	\$15.00
2849	S. J. Anderson	10.00
3978	A. D. Tidmore	9.00

Setting up for this kind of table is like any other—determine the longest lines, enter the setup line, position the column indicators for the center of the columns, and set tabs for the columns.

Because the headings are in a larger escapement than the columns, you may be unsure whether the heading or a line from the column is the longest line. Follow these steps if you are unsure.

- Using the escapement for the heading, type the longest line in the heading.
- Carrier return.
- Using the escapement for the columns, type the longest line in the column.
- Look at your copy to decide which is larger.

You will enter the setup line with the font and the escapement for the *columns*. If the heading is the longest line, you must allow enough space for it when entering the setup line. The steps below will show you how to do that.

If the heading is the longest line:

- Use the escapement for the heading, and the font for the column.
- With ENTRY up, type the heading at the left margin and carrier return.
- Change to the escapement for the column, and type the heading again.
- Type “i”s until you reach the end of the line typed in the larger escapement.
- Space over and type the number of “i”s entered for the line.

Invoice Number	
Invoice Numberiiii	4
Amount	
Amountii	2

1. Exercise setup:

- Use a yellow font.
- Select a red font for final playback of the headings.
- Reset.
- Enter Flush Left, 32 picas.

2. Enter the setup line using the font and escapement for the *columns* (yellow).

- If the heading is the longest line, enter the heading plus the number of "i's" needed to make it equal to the larger escapement.

||Invoice Number||iii;S. J. Anderson;Amount||i

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3. Play back the line in final and set the column indicators for the center points.

4. If the longest line was a heading, center the column under the heading to determine where to set the tabs.

5. Enter a Tab/Index code and set tabs for the columns.

6. Continue reading the manual.

Entering the table:

- Using the escapement for the heading, center the headings. Do not type the "i's"—they were only for the setup line.
- Enter a Stop code. Make a note indicating where the Stop code is and what font should be placed on the printer when playback stops.
- Change the escapement lever to the color needed for the columns.
- Carrier return and enter the columns.

7. Enter the headings and the table.

- Refer to the steps above the exercise.

8. Play back in final.

- When playback stops, change the escapement and font.

9. Clear memory.

Additional Information About Decimal Tab

To make corrections in the exercises, you have been taught to line return, line delete and retype.

If your table has a large number of columns, and you need to change or correct only one or two numbers in a line, you may prefer not to retype the entire line. The following information discusses how Decimal Tab instructions are “written” in the memory to help you see what steps to take to make corrections more quickly.

A Decimal Tab instruction goes into memory as a tab followed by a Backspace-1 code. When the memory finds this combination of characters, it “knows” that it should count the units in the number or text that comes next. It then puts in a Positioning Backspace which is the same size as all the characters or numbers in front of the decimal point. Then when the material you entered is printed, it is lined up with the decimal point.

TAB ↓ 11.49	TAB ↓ 9.98	TAB ↓ 10.00
-------------------	------------------	-------------------

This line, entered in Decimal Tab, would “look” like this in memory:

word → word → word → word →
Tab/bksp 1/Positioning bksp/11.49/Tab/bksp 1/Positioning bksp/9.98/Tab/bksp 1/Positioning bksp/10.00/CR

To correct a single entry:

- Play back to the column *before* the one you want to change.
- Play back that column a character at a time. Do *not* play back the tab that ends the column.
- Delete one time by word. (This removes the tab.)
- Delete one more time by word. (This removes the Backspace-1, the Positioning Backspace, the number, and the next tab.)
- Decimal Tab and retype the number. To make the number print, use a *regular* tab.

If the entry you are correcting contains any spaces (such as when aligning dollar signs) you will have to use additional word deletes to remove the spaces.

If the entry you are correcting contains only a decimal point and a number (.98) the composer does not insert the Backspace-1 code or the Positioning Backspace. However, the procedure for deleting remains the same.

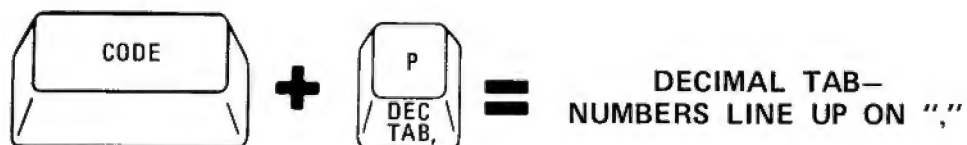
If you shorten the line length and do not change tabs, the table will play back as it was keyed. It may be longer than the new line length.

Decimal Tab With Commas

Some countries that use the metric system type numbers with a comma instead of a decimal point, as in the example below.

Example:

100,023.49	Dec Tab.
100 023,49	Dec Tab,



The DEC TAB “,” key (code “p”) is beside the DEC TAB “.” key.

DEC TAB “,” works just like DEC TAB “.” except that it lines up on a comma instead of a decimal point.

All the rules you learned for DEC TAB “.” apply to DEC TAB “,”. If there is a comma in the number that is not the alignment point, use code “,” for it.

SUMMARY

Varying Space Between Columns:

- Enter multiple Space Position codes between entries in the setup line.

Tables Centered Under Text:

- Enter the setup line for the table. Put a Space Position code at the beginning and end of the setup line.
- Enter the Tab/Index code, setting tabs for the text and for the table.
- Enter the text using “j” or “r”.
- Change to “l” at the beginning of the table.

Roman Numerals:

- Entered with Decimal Tab.
- If indented text follows the numeral, print the numeral with a Zero Index Carrier Return, and enter the indented material with Required Tabs.

Exact Alignment of Columns:

- Enter the setup line. Set tabs *before* flush left columns and *after* flush right columns.
- Release ENTRY and tab to the column.
- Roll up the paper so the short line on the cardholder is over the setup line and use Space-3, Space-1, Backspace-6, or Backspace-1 codes as needed to line up exactly with the setup line.
- Note how many units separate the column and the tab.
- Depress ENTRY and enter the table.
 - For flush left columns, tab and space the number of units.
 - For flush right columns, Decimal Tab, type the number and space the same number of units that you backspaced in the setup.

Centered Headings in a Larger Escapement:

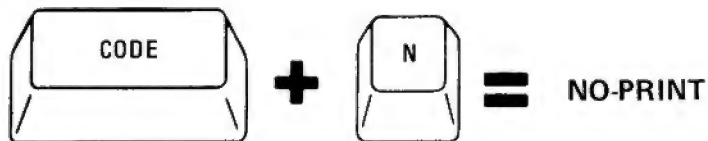
- If the heading is larger than the column;
 - Type the heading in its correct escapement.
 - Type it again in the escapement for the columns.
 - Type “i’s” until you reach the end of the line typed in the larger escapement. Note how many “i’s” you typed.
- The setup line is entered in the escapement for the columns. For the headings larger than the columns, enter the heading plus the number of “i’s” you noted.
- Set tabs as you would for a regular table.
- Remember to enter a Stop code and to change escapement while entering and playing back the table.

SUMMARY

NO-PRINT

No-Print is a feature on the IBM Mag Card Composer that lets you produce final copy on your first typing. It is usually used when you are placing text in certain areas—such as putting the text on ruled forms.

You can use No-Print with justify, ragged right, or flush left. It is usually used with flush left, however, since the type of work requiring No-Print normally should not be adjusted if you play back or scan.

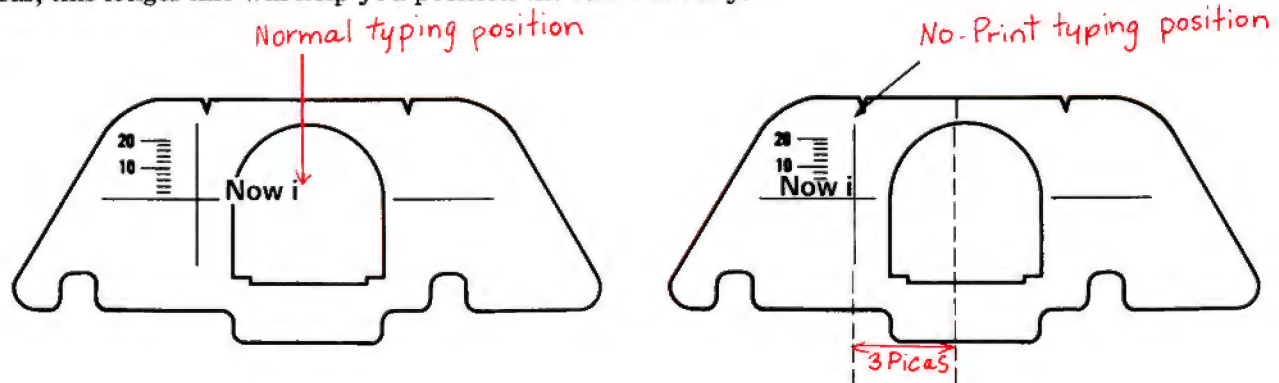


Enter No-Print by holding down the CODE bar while typing an "n". Two things will happen:

- The "No-Print" message comes on.
- The carrier moves over three picas to the right.

1. Exercise setup:
 - Use any red font.
 - Reset.
 - Flush Left, 15 picas.
 - Tab/Index code for single spacing, no tabs.
2. Enter a No-Print code.
3. Look at the message panel and cardholder.
4. Continue reading the manual.

The No-Print line on the cardholder is now exactly at your typing point. Since No-Print is used to place text very accurately in certain areas, this longer line will help you position the text correctly.



When you are entering text in No-Print, nothing prints on the page as you type, but the carrier moves as if it were printing.

To print the material and end the No-Print, depress the carrier return. The carrier backs up, prints the text, and the "No-Print" message goes out.

5. Carrier return.
6. Look at the cardholder and the message panel. The cardholder is back in its normal position, and "No-Print" has gone out.
7. Do not clear memory.

In this exercise using No-Print, follow the steps as they are given. *Be sure to use the long No-Print line on the cardholder when the "No-Print" message is lighted.*

If you make a mistake while you are typing, look at the steps on the next page to correct it. If you see a mistake after the material is printed, line return, line delete and reenter it. You will learn another way to correct later.

8. Enter a No-Print code.
 - "No-Print" is on.
 - The carrier has moved over three picas and the No-Print line is at the typing point.
9. Center your name (;your name;).
 - Nothing prints, but the carrier moves.
10. Depress tab.
 - The No-Print line on the cardholder should be at the line length.
 - Look at the margin scale. Your line length is 15 picas, but the carrier position indicator is at 18. This is correct, because the carrier has moved over 3 picas.
11. Carrier return.
 - The carrier backs up and prints your name centered.
 - "No-Print" goes out.
12. Carrier return. Using No-Print, center your city and state under your name.
13. Page start and play back in final.
 - Your entry copy should look just like your final copy.
14. Clear memory.

Errors in No-Print

There are two ways to correct errors while you are typing in .
No-Print:

- Backspace to remove any incorrect characters.
- Enter a Delete No-Print code (DEL NO PR) and start again.



- DEL NO PR removes the No-Print code and all the No-Print material that follows it.
- The carrier moves back to its position before you entered the No-Print code.
- Backspace and DEL NO PR will not work after the text has started to print.

Indicating No-Print Area

You normally use No-Print to place text in certain areas on a page or a form. Since you are placing text in certain areas, you must “tell” the composer where those areas begin and end.

- For example, when you centered your name, you typed your name at the left margin and tabbed to the line length. Therefore, the No-Print area was between the left margin and the line length.

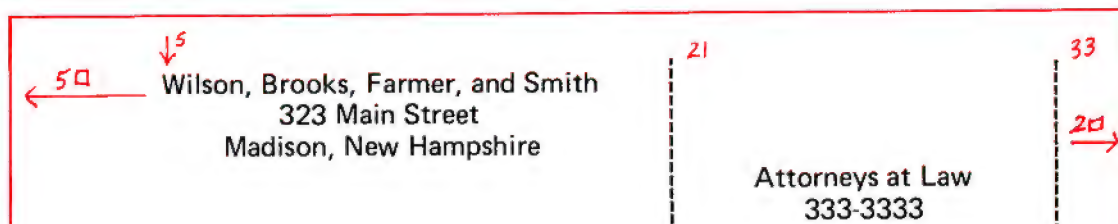
The No-Print area can begin and end at any place on the line. You can either tab or space to show the beginning and end of it.

- If you show only the beginning of the area, and not the end, your text prints flush left where the No-Print code was entered.

In the next exercise, you will both space and tab to indicate the beginning and end of the No-Print area.

- Remember, when the tab key is used, you must have a tab set on the printer (unless you are tabbing to the line length).

1. Exercise setup:
 - Use any red font.
 - Reset.
 - Enter Flush Left, 35 picas.
 - Enter a Tab/Index code for single spacing, with tabs at 21 and 33.
2. Enter the following using the instructions below.
 - Correct any errors when entering text by backspacing or using DEL NO PR.

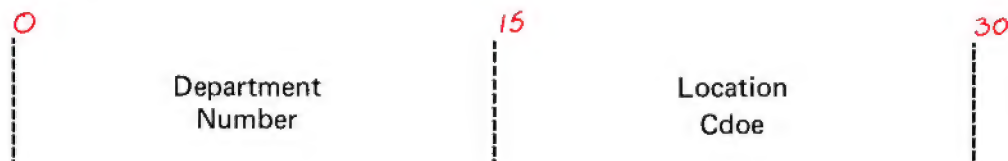


3. Lines 1–3: Spacing to show the beginning and end of the No-Print area.
 - Line 1: Space to 5 on the margin scale. Type the line and carrier return. (Do not use No-Print.)
 - To center lines 2 and 3 under line 1: Space to 5 on the margin scale.
 - Enter a No-Print code. The No-Print line is at the left side of the “W”.
 - Enter the line (;323 Main Street;).
 - Space over until the *No-Print line* is at the right edge of the “h” in Smith.
 - Carrier return to print the material.
 - Carrier return.
 - Repeat these steps for line 3.
4. Lines 4 and 5: Tabbing to show the beginning and end of the No-Print area.
 - Tab to 21.
 - Enter a No-Print code and center the text.
 - Tab to 33, and carrier return to print the text.
 - Carrier return.
5. End the project with two carrier returns and a Page End code.
6. Play back in final.
7. Clear memory.

Multiple No-Print Segments on a Line

You can use No-Print as many times as you wish on the same line.

1. Exercise setup:
 - Use a red font.
 - Reset.
 - Flush Left, 30 picas.
 - Tab/Index code for single spacing, tab at 15.
2. Follow the instructions below to place No-Print segments between points on the line.



3. To center "Department" between 0 and 15:
 - Enter a No-Print code.
 - Enter "Department" using the procedure for centering text.
 - Tab.
 - Carrier return to print the material.
4. To center "Location" between 15 and 30:
 - Enter a No-Print code.
 - Enter "Location" using the procedure for centering text.
 - Tab.
 - Carrier return to print the material.
5. Carrier return and center "Number" and "Cdoe" (make the error) following the steps above.
6. Continue reading the manual.

Corrections in Printed No-Print Material

DEL NO PR (Delete No-Print) is also used to correct errors that you notice after the material has printed.

If you notice an error in material that was entered in No-Print:

- With ENTRY down, line return or line advance to the line with the error.
- Play back by word up to the No-Print segment with the error.
 - This is not necessary if the No-Print segment is at the beginning of a line.
- Depress CHAR/STOP once to play back the No-Print code.
 - “No-Print” comes on and the carrier moves over three picas.
- With ENTRY down, DEL NO PR.
 - “No-Print” goes out, the carrier moves back three picas, and the No-Print code and material with the error is removed from memory.
- Reenter the No-Print code and enter the text in the segment correctly.

To correct “Cdoe”:

7. Line return once.
8. Play back by word up to the No-Print segment with the error.
9. Depress CHAR/STOP to play back the No-Print code.
10. DEL NO PR.
11. Reenter the No-Print code and center “Code”.
12. Tab.
13. Carrier return to print the material.
14. Play back in final.
15. Clear memory.

When playback is stopped during the No-Print segment, the keyboard is locked. Nothing can be typed until the rest of the No-Print segment is played back or deleted.

DEL NO PR will only work during the first part of the No-Print segment (before the carrier backs up to begin printing). If the carrier has backed up, or any of the material in the No-Print segment has printed, you must finish playing out the segment and line return before you can use DEL NO PR.

Entering Font Codes and/or Stop Codes in No-Print Material

Font codes and/or Stop codes (for type styles, leading changes, etc.) can be entered in the No-Print segment.

- If the Font or Stop code is after the last character in the No-Print segment, carrier return to print the segment, then enter the Font or Stop code.
 - A Font or Stop code immediately before the carrier return can be ignored when the material prints.

Checking Horizontal and Vertical Typing Position

When you are working with forms, either typing in ruled areas or creating a ruled form, you may need to check the typing position before typing.

If you need to check horizontal position:

- With ENTRY either up or down, code No-Print.
- The carrier moves three picas to the right, and the No-Print line on the cardholder will be your guide to check the alignment.
 - If ENTRY is up, carrier return to cancel the No-Print code.*
 - If ENTRY is down, DEL NO PR to cancel the No-Print code.

If you need to check vertical position:

- Move the ribbon lift control toward the platen, and type a character. This puts an embossed image on the paper, but no ink.

* When ENTRY is up, No-Print can only be used to check alignment—codes such as Space Position, Format/Line Length, Stop code, etc. cannot be entered. Any characters you type will not print, but will cause the printer to move normally. When you carrier return to end the No-Print, none of the text you typed will print since it was never in memory.

SUMMARY

Typing With No-Print:

- Tab and/or space to the beginning of the No-Print area.
- Enter code “n”.
- Type the material.
- Tab and/or space to the end of the No-Print area.
- Carrier return to print the material.

Errors While Typing:

- Backspace and retype the character(s), or
- Delete No-Print and reenter the segment.

Errors Noticed After Typing:

- Play back until “No-Print” comes on.
- Delete No-Print.
- Reenter the entire No-Print segment.

SUMMARY

FORMS

Typing on Forms

This section will give you the procedures for placing text properly on ruled forms. First, you will position text in the proper horizontal position, and then you will be shown how to place it vertically as well.

Entering text on forms follows the same steps as multiple No-Print segments on a line, where the end of one segment is the beginning of the next. (This was covered on page 151.) In the exercise you did, you set a tab for that point. When you enter text on forms, you may find the lines on the form do not correspond with locations you can set tabs. So, in addition to the steps you have used, you may need to enter Exact Spacing codes to indicate the beginning and end of the No-Print area. If you want to review Exact Spacing codes, refer to page 41.

Example:

Margin	Tab	Tab	Tab	Tab
Quan.	Order No.	Description	Amount	

1. Exercise setup:
 - Use a yellow font.
 - Insert Form B, located in the back pocket of the book.
 - Set the left margin *at or before* the left edge of the form.
 - Reset.
 - On top of the form, enter Flush Left and a line length wider than the form.
 - Enter a Tab/Index code for single spacing and tabs where indicated on the example.
2. Roll down to the first typing line. Do not be concerned about vertical placement. You will learn that later.

Follow these steps for each of the boxes:

3. Enter No-Print.
4. Look at the No-Print line on the cardholder. If it is not exactly on the left edge of the box, enter Exact Spacing codes until it is.
5. Enter the text to be centered (;text;).
6. Tab.
7. Look at the No-Print line. If it is not exactly on the right edge of the box, enter Exact Spacing codes until it is.
8. Carrier return.
9. Follow steps 3–8 for each box.
10. After entering the text for all the boxes, clear memory.

If the text within the boxes is flush right, as in this example, follow the steps below.

Example:

Margin	Tab	Tab	Tab	Tab
Min. Quan.	Product Description	Amount in Dollars	Ship Weight	
Alignment Point	Alignment Point	Alignment Point	Alignment Point	

- Enter No-Print, and use Exact Spacing codes if necessary to line up with the left edge of the box. Remember the left margin must be *at* or *before* the left edge of the form.
- Enter the flush right text (;text).
- Space to the alignment point. Remember to use the No-Print line on the cardholder.
 - If the alignment point is at a whole or half pica, you may wish to set a tab for it and tab rather than spacing.
- Carrier return.

If your text is flush left, tab or space to the place it should begin and type it. It is not necessary to use No-Print for flush left text.

To enter flush left text:

- Set the margin *at* or *before* the left edge of the form. Adjust your paper for more exact alignment if necessary.
- Enter a Flush Left/Line Length code at the top of the paper.
 - The line length should be longer than the form.
- Enter the Tab/Index code, setting tabs for the typing positions.
- Roll the paper so that the base line on the cardholder is several points above the bottom of the box.
- Enter the material at the tabs.

1. Exercise setup:

- Use a yellow font.
- Insert Form A, located in the back pocket of the book.
- Reset.
- Enter Flush Left, and a line length longer than the form.
- Enter a Tab/Index code for single spacing, with tabs where they are indicated in the exercise.

2. Enter the text.

NAME	
ADDRESS	PHONE
CITY	
STATE	ZIP

3. Clear memory.

When the entire form is flush left material, the text can be typed with ENTRY up. However, it is recommended that all text be entered into memory so the backspace key can be used for corrections and the text can be played back if necessary. Also, with ENTRY up, the backspace key always backs up six units, so your corrections might not be in the proper place.

Vertical Centering

Before you practice centering vertically in an area, you should be familiar with these terms:

Baseline: The line on which the typing rests.



The word "line" is shown in a large, bold, serif font. A horizontal line is drawn directly beneath the letters. An arrow points from the label "BASELINE" to this line.

Descenders: Characters that extend below the baseline.



The word "they" is shown in a large, bold, serif font. A horizontal line is drawn beneath the letters. An arrow points from the label "DESCENDER" to the descender of the letter 'y'.

Cap Height: The height of the capital letters. There are no descenders in capital letters, so the cap height is less than the point size.

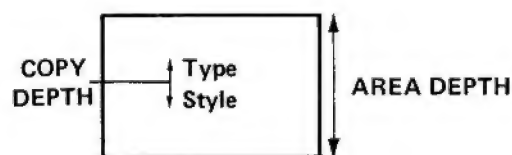
Point Size: The size of your type, from the top of the tall letters to the bottom of the descenders.



The word "They" is shown in a large, bold, serif font. A horizontal line is drawn beneath the letters. Two vertical double-headed arrows are shown: one on the left labeled "CAP HEIGHT" measuring the height of the capital 'T', and one on the right labeled "POINT SIZE" measuring the height from the top of the 'T' to the bottom of the descender of 'y'.

Area Depth: The space between the top and bottom of the area expressed in points.

Copy Depth: The number of points your text, or copy, take up.



To vertically center text, you need to know:

- Area depth—the number of points in the box or area.
- Copy depth—the number of points taken up by the printed material.
- Vertical centering point—how far down to come before typing.

To find the area depth, measure the box with the Point Scale on the Graphics Scale, or:

- With the form in the printer, align the horizontal line on the cardholder with the top edge of the box.
- Roll down the page (using the platen knobs) until the horizontal line on the cardholder is aligned with the bottom edge of the box.
- Count the number of points as you turn the platen knobs. This number is the number of points in the box—the area depth.

To determine the copy depth:

- For one line of type, the copy depth is the height of the type you are using (the number on the font).
- For more than one line, the copy depth is the number on your font times the number of lines to be centered plus the extra leading between lines.

Example:

Printing 11 point type, leading on 13
Quality

$$\begin{array}{rcl} 11 & \text{pt. type} & \\ \times 2 & \text{number of lines to be centered} & \\ \hline 22 & & \\ + 2 & \text{extra leading between lines} & \\ \hline 24 & \text{pt. copy depth} & \end{array}$$

- If the text is in all caps, use the cap height (rather than the point size) of the font to determine copy depth.

To determine the vertical centering point:

- Use the charts on pages 48 and 49 in the *IBM Mag Card Composer Reference Book*.
- Use the following procedure for either chart.
 - In the column marked Cap Ht., find cap height for the font you are using. Cap heights are located in the *Reference Book* (page 46) or on the Graphics Scale. For the example, the cap height is 7 points.
 - Move across that line until you come to the number representing the copy depth. In the example, the copy depth is 11 points.
 - In the Area Depth column on the bottom portion of the chart, find the area depth. For this example, the area depth is 44 points.
 - Move straight down the line from the top of the chart and across the line on the bottom of the chart until the lines meet.
 - This is the number of points to come down from the top of the box. For this example, the number is 24.

**Vertical Centering Chart—
One Line of Copy**

		Total Copy Depth—Points							
Cap. Ht.	Ht. *								
		5	6	7	8	9	10	11	12
7	7								
8	8								
9	9								

Area Depth—Points									
		39	40	41	42	43	44	45	46
39	24	24	23	23	22	22	21	21	
40	25	24	24	23	23	22	22	21	
41	25	25	24	24	23	23	22	22	
42	26	25	25	24	24	23	23	22	
43	26	26	25	25	24	24	23	23	
44	27	26	26	25	25	24	24	23	
45	27	27	26	26	25	25	24	24	
46	28	27	27	26	26	25	25	24	
47	28	28	27	27	26	26	25	25	
48	29	28	28	27	27	26	26	25	
49	29	29	28	28	27	27	26	26	
50	30	29	29	28	28	27	27	26	
51	30	30	29	29	28	28	27	27	
52	31	30	30	29	29	28	28	27	
53	31	31	30	30	29	29	28	28	
54	32	31	31	30	30	29	29	28	
55	32	32	31	31	30	30	29	29	
56	33	32	32	31	31	30	30	29	
57	33	33	32	32	31	31	30	30	
58	34	33	33	32	32	31	31	30	
59	34	34	33	33	32	32	31	31	
60	35	34	34	33	33	32	32	31	
61	35	35	34	34	33	33	32	32	
62	36	35	35	34	34	33	33	32	
63	36	36	35	35	34	34	33	33	
64	37	36	36	35	35	34	34	33	
65	37	37	36	36	35	35	34	34	
66	38	37	37	36	36	35	35	34	

Points to Go Down from Top of Area to Begin First Line
24

Vertical and Horizontal Centering

To center text both vertically and horizontally:

- Set the left margin *at* or *before* the left edge of the form. Adjust your paper for more exact alignment with the lines on the form, if necessary.
- Enter a Format/Line Length code at the top of the paper. (The line length should be wider than the form.)
- Enter the Tab/Index code, setting tabs where needed.
- Find the vertical centering point.
 - Align the horizontal line on the cardholder with the top edge of the box.
 - Come down the number of points to reach the typing line.
- Center the material using No-Print. Review those procedures if you are unsure of them.

Follow these steps for each of the forms in the exercise.

1. Do the following exercise setup for each form.

- Use a yellow font.
- Insert Form C for the first two, and Form D for the third one. The forms are in the back pocket of the book.
- Reset.
- Enter Flush Left, and a line length wider than the form.
- Enter a Tab/Index code for single spacing, tabs where needed.

2. Enter the text in the boxes. Center it vertically and horizontally.

3. If you wish, play back a final copy.

4. Clear memory.

Type Styles

Serial Number
of Equipment



WALLACE NATIONAL BANK

On the Square
New Market, Texas

STATEMENT OF ACCOUNT

for the period

of

Checks And Other Charges	Deposits And Other Credits	Date	Balance

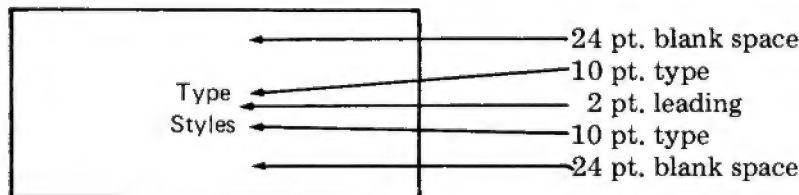
Centering Copy in Large Areas

When the area depth is larger than those given on the vertical centering charts, use the following method for centering copy.

- Find the area depth of the box. (In the example below it is 70 points.)
- Determine the depth of the text copy to be typed in the box. (In the example below it is 22 points.)
- Subtract the copy depth from the area depth of the box to find the amount of space left over.

$$\begin{array}{r} 70 \text{ points area depth} \\ -22 \text{ points copy depth} \\ \hline 48 \text{ points space left over} \end{array}$$

- Divide this space in half. Half of the space will be put above the text and half of the space will be below. ($48 \div 2 = 24$ points)



- If the number does not divide evenly, put the larger amount of space below the text.
- Come down from the top edge of the box the amount of space left blank plus the cap height (24 pt. blank space + 7 pt. cap height = 31 points to come down).

1. Exercise setup:

- Use a red font.
- Insert Form E (in the back of the book).
- Reset.
- Flush Left, Line Length code.
- Tab/Index code, tabs where needed.

2. Center the text below vertically and horizontally in the box.

Name
Street Address
City, State and Zip Code

3. Clear memory.

Hints for Typing on Ruled Forms

- Use long paper to allow control at the top and bottom of the form.
- After inserting the paper, straighten the form. The lines of the *form*, not the paper, must be straight for accurate alignment of the text.
- Use the horizontal and vertical lines on the cardholder as guides for positioning the form.
 - To check the horizontal position:
 1. Type or enter a No-Print code.
 2. Use the No-Print line on the cardholder to check the alignment.
 3. Cancel the No-Print code.
 - Vertical position can be checked by engaging the ribbon lift control and typing the character. You will get an embossed image on the paper.
- Set the margin *at* or *before* the left edge of the form. Remember, the left margin can be set only on a whole pica. Adjust the paper if necessary.
- Set tabs at as many of the typing positions as possible. These tabs are a fast, efficient method of moving across the form.
- Use the same leading dial setting throughout the form. Move the platen knobs for leading variations.
- Enter Stop codes where you will have to roll up the paper. Write down (either on the copy you are working from or on scratch paper) where the Stop codes are and how many clicks to roll up or down if you play back.

Forms—Ruling

Forms can be ruled with ENTRY up or down.

If you are creating a form that will be recorded and used again, or if you intend to rough draft the form and play it back, type it with ENTRY down, and use the Tab/Index code as usual. Enter a carrier return and a Stop code after each line so that playback will stop if you need to use the platen knobs to place lines properly.

If you are creating a form to be used only once, and you do not intend to rough draft it, you may enter it with ENTRY up. If ENTRY is up, you cannot enter a Tab/Index code or a Format/Line Length code.

Tabs can be set on the composer with ENTRY up. Tabs should be set with ENTRY up *only* for projects that will not be recorded. If you are setting tabs with ENTRY up, use TAB LOC to find the tab setting. The space bar may not position you exactly at a half or whole pica.

The exercises in this section may be typed with ENTRY either up or down. If you type with ENTRY down, each exercise must begin with a Format/Line Length code and a Tab/Index code. These steps are not included in the exercise boxes. If you reset between exercises, you must reenter the Font Code Number for your ruling font.

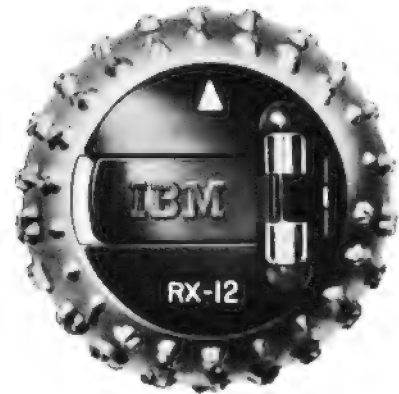
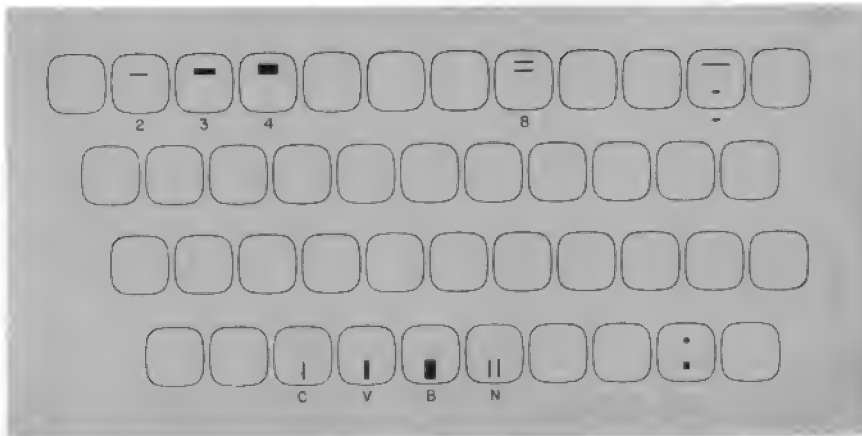
There are two fonts which can be used to rule forms. They are the Ruling font and the Copperplate Gothic font.

The Ruling font is identified by “RX-12” on the top of the font. It is available only in red escapement.

The Copperplate Gothic font is identified by “CG” as the type style abbreviation and “M” in the weight position on the top of the font. It is available in 6-, 8-, 10-, and 12-point type.

1. If you have a Ruling font, read pages 166–171.
2. If you have a Copperplate Gothic font, read pages 172–177.

Ruling—Font Code Number 76



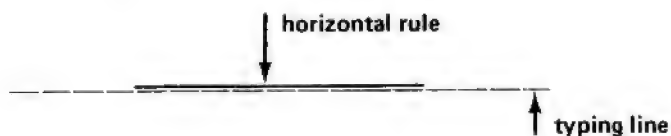
This font has twelve characters—four vertical rules and eight horizontal rules including the dash and dot leaders. When Font Code Number 76 is entered, only the twelve ruling positions print.

When using this font, impression control should be set on 1 (one) and the escapement lever on red.

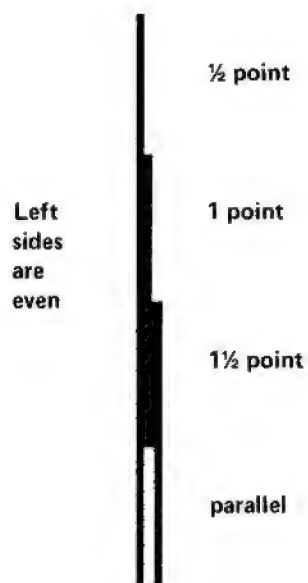
There are different thicknesses of rules. The thickness is measured in points. The following chart gives the thickness and keyboard location for each rule. In addition, it gives the unit value for the horizontal rules.

	Rule	Keyboard Location	Unit Value
Horizontal	½-point thickness	Uppercase 2	6
	1-point thickness	Uppercase 3	6
	1½-point thickness	Uppercase 4	6
	Parallel	Uppercase 8	6
	Hairline	Uppercase hyphen	8
	Dash Leader	Lowercase hyphen	3
	Square Dot Leader	Lowercase period	3
	Round Dot Leader	Uppercase period	3
Vertical	½-point thickness	Lowercase c	
	1-point thickness	Lowercase v	
	1½-point thickness	Lowercase b	
	Parallel	Lowercase n	

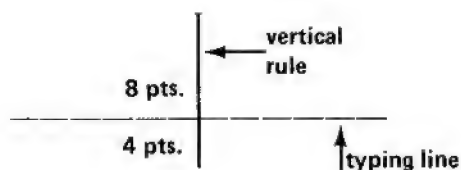
The lower edge of the horizontal rules and leaders is always on the typing line (or baseline). These keys are typamatic.



The vertical rules have the same left printing point. If parts of a single vertical line are different sizes of rules, the left side will be even.



The bottom edge of the vertical rules is four points below the typing line; the top edge is eight points above the typing line.



Vertical rules are nonescaping (the carrier does not move).

Horizontal Rules

To fill a given area with horizontal rules, use this reference:

_____	12 horizontal rules ($\frac{1}{2}$ -, 1-, $1\frac{1}{2}$ -point, and parallel)	= 1 inch (2.54 cm)
_____	9 hairline rules	= 1 inch (2.54 cm)
.....	24 leaders (dash leader, square dot leader, round dot leader)	= 1 inch (2.54 cm)

To be sure that horizontal rules are even on the right side, always begin typing the rules at the margin or at a tab.

1. Exercise setup:
 - Set a tab at 3 picas.
 - Enter Font Code Number 76.
 - Use the Ruling font.
 2. Using the $\frac{1}{2}$ point horizontal rule (uppercase “2”), type a line 10 picas long and carrier return.
 3. Tab to 3 picas.
 4. Using the 1-point horizontal rule (uppercase “3”), type a 7-pica line.
- The lines should be even on the right side.

Vertical Rules

All vertical rules are 12 points tall. To type vertical rules, set the leading dial on 12.

- Six (6) vertical rules equal one inch (2.54 cm).

When you type a vertical rule, the carrier does not move. When typing several vertical rules to make a line, use the index key.

- The index key moves the paper up without returning the carrier to the left margin.

1. Exercise setup:
 - Set the leading dial on 12.
 - Set the impression control on “1” (this is the recommended setting when using the Ruling font).
2. Space 3 times.
3. Type a $\frac{1}{2}$ -point vertical rule (lowercase “c”).
4. Index and type another $\frac{1}{2}$ -point vertical rule.

For ease in typing vertical rules at several locations across the page, type one vertical rule at each location across the page and then carrier return and type the next set of vertical rules.

1. Set tabs at 5, 10, and 15 picas.
2. Type the first vertical rule at the margin. (Use the ½-point rule.)
3. Tab and type the second vertical rule.
4. Tab and type the third vertical rule.
5. Tab and type the fourth vertical rule. Carrier return.
6. Continue down the paper using these steps until you have made four 1-inch (2.54 cm) vertical lines (6 vertical rules = 1 inch or 2.54 cm).

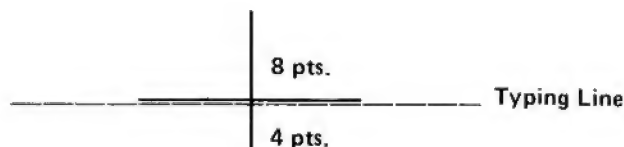
If you need to have vertical rules equally spaced across the line but they do not have to be at specific tab stops, use the following procedure:

- Enter a Format/Line Length code.
- Enter a Tab/Index code for single or double spacing, and any tabs necessary.
- Enter the first vertical rule, then a Space Position code.
- Continue entering vertical rules and Space Position codes until you have entered the correct number of vertical rules. End the line with a carrier return.
 - If you have to vary the space between the rules, enter multiple Space Position codes for the areas which are to be larger.
- Play back in final to produce the properly placed lines.

For additional flexibility in placing vertical rules, you can change the Minimum Space Size (page 78) and enter one or more spaces between rules.

Joining Vertical and Horizontal Rules

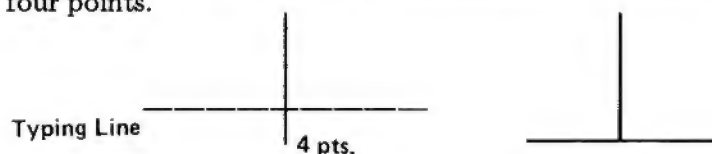
Remember, horizontal rules rest on the typing line. Vertical rules print eight points above and four points below the typing line.



To join the top of a vertical rule to a horizontal rule, you must come down eight points before typing the vertical rule.



To join a horizontal rule to the bottom of a vertical rule, you must come down four points.



When joining vertical and horizontal rules, set the leading dial on 4. The carrier return (rather than rolling the platen knobs) can then be used to come down the four or eight points needed to join the vertical rule with the horizontal rule. When two or more vertical rules are typed to form a solid line, carrier return or index three times (12 points) after each vertical rule.

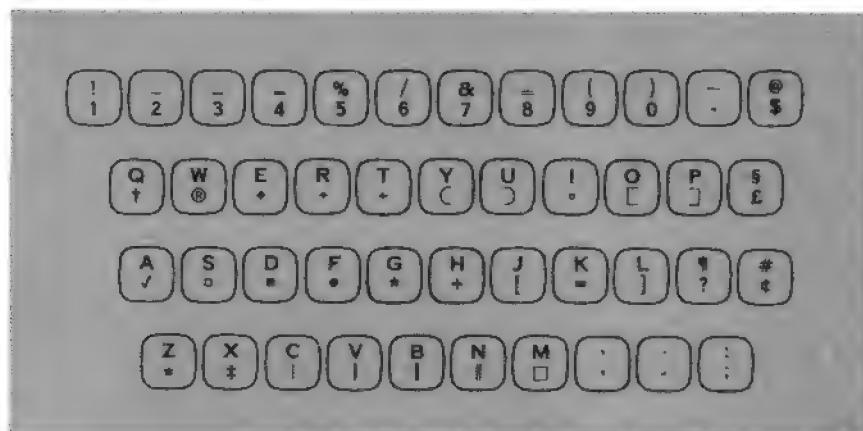
When joining the vertical 1-point, 1½-point, or parallel rule to the right side of the horizontal rule, you must backspace to make the upper right-hand corner. To join the vertical rule to a horizontal rule, use the following procedure for *each* vertical rule joined to the right side of a horizontal rule.

- ½-point rule. Just type the rule.
- 1- and 1½-point rule Enter a Backspace-1 code and type the rule.
- Parallel rule Enter two Backspace-1 codes and type the rule.

Continue to use the Backspace-1 code(s) for each vertical rule on the right side.

1. Set the leading dial on 4.
2. Set a tab at 6 picas.
3. Type a 6-pica horizontal line starting at the left margin. Use the 1-point horizontal rule (uppercase "3").
4. Carrier return twice (8 points).
 - Remember, the top of the vertical rule prints eight points above the typing line.
5. Type a vertical rule at the margin. Use the 1-point vertical rule (lowercase "v").
6. Tab.
7. Enter a Backspace-1 and type a vertical rule.
8. Carrier return *three* times.
 - Remember, the vertical rules are twelve points tall and the leading dial is set on 4.
9. Type a vertical rule at the margin, tab, Backspace-1 and type a vertical rule at the right side of the horizontal rule.
10. Carrier return *three* times and type another vertical rule at the left margin and at the right side of the horizontal rule.
11. Carrier return *once*.
 - Remember, to join a horizontal rule to a vertical rule, you must come down four points of leading.
12. Type a 6-pica horizontal rule.
13. Reenter Font Code Number 64.

Copperplate Gothic—Font Code Number 79

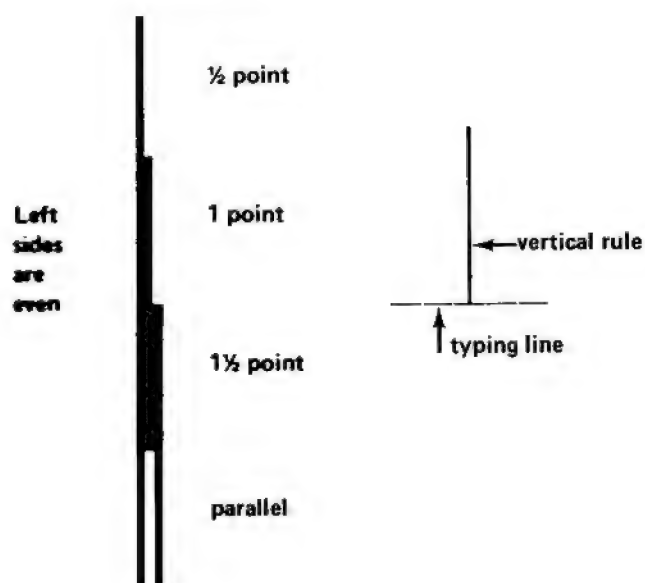


The Copperplate Gothic font has six horizontal and four vertical rules.

The lower edge of the horizontal rules rests on the typing line (or baseline). These are typamatic keys.



The vertical rules have the same left printing points. If parts of a single vertical line are of different sizes of rules, the left side will be even. The bottom of the vertical rule touches the typing line. Vertical rules are nonescaping (the carrier does not move).



See the charts on page 50 in the *IBM Mag Card Composer Reference Book* for capital height, unit values, and impression settings for these fonts.

The following chart gives the thickness and keyboard location for each rule. In addition, it gives the unit value for each horizontal rule.

	Rule	Keyboard Location	Unit Value
Horizontal	½-point thickness	Uppercase 2	6
	1-point thickness	Uppercase 3	6
	1½-point thickness	Uppercase 4	6
	Parallel	Uppercase 8	6
	Hairline	Uppercase hyphen	8
	Dash Leader	Lowercase hyphen	3
Vertical	½-point thickness	Lowercase c	
	1-point thickness	Lowercase v	
	1½-point thickness	Lowercase b	
	Parallel	Lowercase n	

Horizontal Rules

To be sure that horizontal rules are even on the right side, always begin typing the rules at the margin or at a tab.

1. Exercise setup:

- Set a tab at 3 picas.
- Enter Font Code Number 79.
- Use a Copperplate Gothic font that has rules.
- Set the escapement lever to match the triangle on the font.

2. Using the ½-point horizontal rule (uppercase “2”) type a horizontal line 10 picas long.

3. Carrier return and tab to 3 picas.

4. Using the 1-point horizontal rule (uppercase “3”) type a 7-pica line.

The lines should be even on the right side.

Vertical Rules

The vertical rules are one point higher than the capital height of the font. Set the leading dial one point higher than the capital height. (The Cap Height Chart is in the *IBM Mag Card Composer Reference Book* on page 50).

When you type a vertical rule, the carrier does not move. When typing several vertical rules to make a line, use the index key. The index key moves the paper up without returning the carrier to the left margin.

1. Exercise setup:
 - Set the leading dial one point higher than the cap height of your font.
 - Set the impression control for the font you are using.
2. Space three times and type a ½-point vertical rule (lowercase "c").
3. Index and type another ½-point vertical rule.

For ease in typing vertical rules at several locations across the page, type one vertical rule at each location across the page. Then carrier return and type the next set of vertical rules.

1. Set tabs at 5, 10, and 15 picas.
2. Using the ½-point rule, type the first vertical rule at the margin.
3. Tab and type the second vertical rule.
4. Tab and type the third vertical rule.
5. Tab and type the fourth vertical rule. Carrier return.
6. Continue down the paper until each vertical line is three rules high.

If you need to have vertical rules equally spaced across the line length, but they do not need to be at specific tab stops, use the following procedure:

- Enter a Format/Line Length code.
- Enter a Tab/Index code for single or double spacing, and any tabs necessary.
- Enter the first vertical rule, then a Space Position code.
- Continue entering vertical rules and Space Position codes until you have entered the correct number of vertical rules. End the line with a carrier return.
 - If you have to vary the space between the rules, enter multiple Space Position codes for the areas which are to be larger.
- Play back in final to produce the properly placed lines.

For additional flexibility in placing vertical rules, you can change the Minimum Space Size (page 78) and enter one or more spaces between the rules.

Joining Horizontal and Vertical Rules

To join the vertical 1-point, 1½-point, or parallel rule to the right side of the horizontal rule you must backspace to make the right-hand corner. To join the vertical rule to the horizontal rule, use the following procedure for *each* vertical rule joined to the right side of a horizontal rule.

½-point rule	Just type the rule.
1- and 1½-point rule	Enter a Backspace-1 code and type the rule.
Parallel rule	Enter two Backspace-1 codes and type the rule.

- Continue to use the Backspace-1 code(s) for each vertical rule on the right side.

After typing the vertical rules needed, enter either a Backspace-6 or Backspace-1 code and type a Zero Index Carrier Return before joining a horizontal rule at the bottom of the vertical rule.

- A Zero Index Carrier Return is entered by holding down the CODE bar while depressing the index key (code INDEX).

Type another horizontal rule.

1. Set a tab at 6 picas.
2. Type a 6-pica horizontal line starting at the left margin.
 - Use the 1-point horizontal rule (uppercase "3").
3. Carrier return and type a vertical rule at the left margin.
 - Use the 1-point vertical rule (lowercase "v").
4. Tab.
5. Enter a Backspace-1 and type a vertical rule.
6. Carrier return and type another vertical rule at the margin, tab, Backspace-1 and type another vertical rule at the right side of the horizontal rule.
7. Enter a Backspace-6 code.
8. Enter a Zero Index Carrier Return and type a 6-pica horizontal rule.
9. Reenter Font Code Number 64.

Ruled Lines Within Text

These exercises give procedures for ruled lines within justified text, and within flush left text.

Example:

Enclosed is my check in the amount of \$_____. Please apply this amount to my balance. The balance due is then _____ and is payable in 30 days.

or

Name _____ Date _____
Account Number _____

You will need one of the following fonts for this application:

- Typewriter Characters (identified by “MT” under the weight position).
- Copperplate Gothic (identified by “CG” in the type style position and “M” in the weight position).
- Ruling font (identified by “RX-12”).

When choosing which font to use, consider the following:

- The Typewriter Characters font can be used for the text as well as the rules.
- Copperplate Gothic or Ruling fonts should be the same escape-ment as the font used for the text. Also, these two fonts use a different Font Code Number—Copperplate Gothic is 79 and Ruling font is 76.

Ruled Lines Within Justified Text

Example:

Enclosed is my check in the amount due of
\$_____. Please apply \$_____ to the purchase of _____ Savings Bond
Certificates maturing in _____ months
with _____% annual interest payable
quarterly.

- Enter the text up to the ruled line.
- Enter a Font Change if using Copperplate Gothic or Ruling font for the lines.
- Enter any space needed to separate the text from the ruled line.
- Enter em dashes for the desired length of the line.
 - If the ruled line ends at the line length, enter the em dashes until the keyboard locks, backspace once (as if making a correction), and carrier return.
 - If you do not backspace once, part or all of the ruled line will be dropped during final playback.
 - It is not necessary to change fonts until final playback.
- Enter a Font Change at the end of the ruled line if necessary.
- Continue entering the text.

1. Exercise setup:
 - Reset.
 - Enter the Format/Line Length code.
 - Red fonts—use Justify, 17 picas.
 - Yellow fonts—use Justify, 15 picas.
 - Blue fonts—use Justify, 13 picas.
 - Enter a Tab/Index code for single spacing, no tabs.
2. Enter the example above.
 - Remember to enter a Font Change if you are using Copperplate Gothic or Ruling fonts.
3. Play back in final.
4. Clear memory.

Ruled Lines Within Flush Left Text

Example:

Name _____ Date _____
Present Address _____
City, State, & Zip _____
Telephone No. _____ Social Security No. _____

This example requires two kinds of procedures; one for the lines with text and one rule (the middle two lines above), and one for the lines with more than one set of text and rules (the first and last lines above).

For lines with more than one set of text and rules:

- Enter the text before the first rule.
- Enter any spaces needed between the text and the rule.
- Enter a Font Change if the font should be changed in playback.
- Enter em dashes for the desired length of the rule.
- Enter a Space Position code.
- Enter a Font Change if necessary.
- Enter the text before the next rule.
- Enter any spaces needed between the text and the rule.
- Enter a Font Change if necessary.
- Enter em dashes until the keyboard locks.
- Backspace once as if making a correction.
- Enter a Font Change if necessary.
- Carrier return.

For lines with text and one rule:

- Enter the text before the rule.
- Enter any spaces needed between the text and the rule.
- Enter a Font Change if necessary.
- Enter em dashes approximately halfway across the line length.
- Enter three Backspace-6 codes.
- Enter a Space Position code.
- Continue entering em dashes until the keyboard locks.
- Backspace once (as if making a correction).
 - If you do not backspace once when the keyboard locks, part or all of the rule will be dropped when you play back.
- Enter a Font Change if necessary.
- Carrier return.

1. Exercise setup:

- Reset.
 - Set the escapement lever for the font you are using.
 - Enter Flush Left, 32 picas.
 - Enter a Tab/Index code for single spacing, no tabs.
2. Enter the example on the previous page.
- End the rule after "Name" at about 23 picas.
 - End the rule after "Telephone No." about 17½ picas.
3. Play back in final.
4. Clear memory.

SUMMARY

Typing on Forms—Horizontal Placement:

- Set the left margin *at or before* the left edge of the form.
- Enter a Format/Line Length code wider than the form.
- Enter a Tab/Index code.
- Enter the text on the form using No-Print.
 - Flush left text can simply be typed.

Typing on Forms—Vertical Placement:

- Determine the area depth.
- Determine the copy depth.
- Use the Vertical Centering Chart or the formula on page 163 to position text.

Ruled Lines in Justified Text:

- Enter the text up to the ruled line.
- Enter any space necessary between the text and the line.
- Change the font if necessary.
- Enter the rule.
 - If the rule ends at the line length, type until the keyboard locks and backspace once.

Ruled Lines in Flush Left Text:

- Lines with text and one rule;
 - Enter the text and any spaces needed between the text and the ruled line. Enter a Font Change if necessary.
 - Enter approximately half the ruled line, three Backspace-6 codes, a Space Position code, and the rest of the ruled line. Type until the keyboard locks and backspace once.
- Lines with more than one set of text and rules.
 - Enter the text and any spaces needed between the text and the rule. Enter a Font Change if necessary.
 - Enter the ruled line and a Space Position code.
 - Enter a Font Change if necessary and enter the next text.
 - Enter a space if needed, then the next rule. If the ruled line goes to the line length, type until the keyboard locks and backspace once.

SUMMARY

SPECIAL FORMATS

Slanted Margins

Copy can be entered to play back with slanted margins on the left side, right side, or on both left and right sides. The procedures given in this section are for slanted margins in half-pica increments. When the format requires a slanted margin other than half- or whole-pica increments, use the procedure for Art Contours, page 190. When doing slanted margins, you may find it useful to be able to squeeze an extra character on a line, or to force a short line to justify. The procedure for Character Squeezing is on page 197. The procedure for Forced Justification is on page 198.

Slanted Left Margin

Example:

The incomes resulting from these many jobs combine to form mass markets. Mass markets make possible mass production. Mass production results in lower prices, and these lower prices, in turn, invite mass consumption, with a continually rising standard of living.

To enter copy with a slanted left margin:

- Enter a Justify/Line Length code for the longest line.
- Enter a Tab/Index code with tabs every half pica for approximately half the line length.
- Enter the first line and carrier return.
- Enter a Required Tab, enter the line and carrier return.
- Enter another Required Tab, enter the line and carrier return.
- Continue the above step for each line.
- End with two Required Carrier Returns and a Page End code.

1. Exercise setup:
 - Use a yellow font.
 - Reset.
 - Enter Justify, 18 picas.
2. Enter a Tab/Index code with tabs every half pica to 9 picas.
3. Enter the example above.
4. Play back in final, and clear memory.

If your left margin slants the opposite way:

Use regular tabs. Enter the largest number of tabs on the first line, and enter one less on each line that follows.

Slanted Right Margin

Example:

It is the human skills embodied in our resources
of labor which are the country's greatest
assets. Most Americans believe that work is
not only worth doing, but that it is worth
doing well.

To enter copy with a slanted right margin:

- Enter a Justify/Line Length code for the first line.
- Enter a Tab/Index code for the proper spacing.
- For the lines different than the initial line length, enter a new line length.
 - Enter the Justify format at the beginning of the line. The carrier moves to the line length.
 - If the next line is shorter, backspace once (one-half pica) and carrier return.
 - If the next line is longer, space once (one-half pica) and carrier return.
- Repeat the steps for each line that is different than the previous line.

1. Exercise setup:
 - Use a yellow font.
 - Reset.
 - Enter Justify, 16 picas.
2. Enter the example. (Each line is one-half pica shorter than the one above it.)
3. End with two carrier returns and a Page End code.
4. Play back in final and clear memory.

Hint: If a line ends before the bell rings and is followed by a Format/Line Length code, the line will not justify. To force it to justify, type the line and tab to the line length; or, enter Space Position codes between all the words.

Slanted Left and Right Margins

Slanted left and right margins are a combination of the procedures for left and right slanted margins.

Example:

Within the past few centuries, mankind has developed new sources of physical power which have revolutionized not only industry—but indeed the world itself.

For centuries the only sources of physical power which had been used by man were his muscles, those of his animals, and the winds, tides, and waterfalls when and where they were available.

To enter copy with slanted left and right margins:

- Enter a Justify/Line Length code for the first line.
- Enter a Tab/Index code with tabs every half pica for approximately half the line length.
- For slanted lines, do the following:
 - Reenter the “j”.
 - Space or backspace to the new line length and carrier return.
 - Enter a Required Tab, enter the line, and carrier return.
- Repeat the last step for each slanted line.
- End with two Required Carrier Returns and a Page End code.

1. Exercise setup:
 - Use a yellow font.
 - Reset.
 - Enter Justify, 20 picas.
2. Enter a Tab/Index code with tabs every half pica for 10 picas.
3. Enter the example. End with two carrier returns and a Page End code.
4. Play back in final and clear memory.

Remember, if your left margin slants from right to left (rather than left to right as in this example), you would enter the largest number of *regular* tabs on the first line, and enter one less regular tab at the beginning of each following line.

Parallel Slanting Margins

In this example of slanting margins, all the lines of text are the same length, and the left and right margins are parallel.

Example:

No man in recorded history exemplifies
the inventive capacity of mankind more
fully than the 15th-century genius,
Leonardo da Vinci. He investigated vir-
tually every field of science and recorded
his observations and reactions in thou-
sands of sketches and notes. They
contained practical solutions to specific
problems of his day, and also envisioned
such future possibilities as flying ma-
chines, automobiles and automation. No
field of endeavor was too small to excite
his interest; none so large as to smother
his spark.

Since the lines are the same length, you can enter all the text at the left margin as in the entry copy below. You create the slanted margins by controlling playback.

To control the playback, you will enter a Stop code at the beginning of each line. After each line plays back, you can then move the carrier to the desired point.

```
jTttttttS                               64
SC No man in recorded history exemplifies
SC the inventive capacity of mankind more
SC fully than the 15th-century genius,
SC Leonardo da Vinci. He investigated vir-
SC tually every field of science and recorded
SC his observations and reactions in thou-
SC sands of sketches and notes. They
SC contained practical solutions to specific
SC problems of his day, and also envisioned
SC such future possibilities as flying ma-
SC chines, automobiles and automation. No
SC field of endeavor was too small to excite
SC his interest; none so large as to smother
SC his spark.
```


1. Exercise setup:
 - Use a red font.
 - Reset.
 - Enter Justify, 16 picas.
 - Enter a Tab/Index code for single spacing, tabs every half and whole pica to 3 picas.
2. Enter the example line for line.
 - Remember to enter a Stop code at the beginning of each line.
3. Continue reading the manual.

To create the slanted margins, follow these steps:

- ENTRY up.
- Move the carrier (if necessary) to the point where the line should begin. You may tab or space, but do *not* use Required Tabs.
- Depress AUTO.
 - You must use AUTO, *not* LINE, WORD or CHAR/STOP.

4. Page start.
5. Release ENTRY.
6. Depress AUTO.
 - The first line plays back.
 - "Stop Code" is on.
7. Tab one time and depress AUTO.
8. Tab two times and depress AUTO.
9. Continue playback using tabs and AUTO.
 - Follow the slanted margins on the example.
10. Clear memory.

Characters Outside the Line Length

When typing characters outside the line length, you may find it useful to be able to squeeze an extra character on a line, or to force a short line to justify. The procedure for Character Squeezing is on page 197. The procedure for Forced Justification is on page 198.

Example:

Blue, Henry, Meteorological Information
Gathered from Cloud Formations. \$5.00

Foot, Lawrence, Walking Tours of Ten
Famous Collegiate Centers \$7.50

Gray, Dwight W., The Cause and Cure of
Urban Smog. \$4.95

To type text outside the line length, use the following steps:

- Enter the text that is within the line length, then enter a Space Position code or Dot Leader code.
- Enter the characters that are to be outside the line length.
- Enter Backspace-6 and Backspace-1 codes equal to the number of units in the characters outside the line length.
 - Use the Character Unit Values Chart on the Graphics Scale, or see page 43 in the *IBM Mag Card Composer Reference Book*.
 - Each space is three units (unless you have changed the Minimum Space Size).
 - If you reach the left margin before completing the backspace codes, continue entering them even though you are at the margin.
- Carrier return.

1. Exercise setup:
 - Use a yellow font.
 - Reset.
 - Enter Justify, 15 picas.
 - Enter a Tab/Index code for single spacing, no tabs.
2. Enter the example above.
 - If the keyboard locks while you are entering the characters outside the line length, follow the steps listed below the exercise.
3. Play in final.
4. Clear memory.

If the keyboard locks:

- Line return and play back to, *but not through*, the last character on the line.
- Line delete.
- Release ENTRY and carrier return.
- Depress ENTRY and continue entering characters.

Text Dividers

Century and Classified News type styles can be used to produce a solid horizontal line to divide segments of text.

Example:

INTRODUCTION
BASIC
INDENTED PROJECTS

The em dash (uppercase hyphen) is typed to print the solid line.

To enter a horizontal line to the line length:

- Enter em dashes approximately halfway across the line length.
- Enter three Backspace-6 codes.
- Enter a Space Position code.
- Continue typing em dashes until the keyboard locks at the line length.
- Backspace once (as if making a correction) and carrier return.
 - If you do not backspace once, part of the line will be dropped when playing back in final.

1. Exercise setup:
 - Set the escapement lever for the font you are using.
 - Reset.
 - Enter Flush Left, 18 picas.
 - Enter a Tab/Index code for single spacing, no tabs.
2. Enter the example above.
3. Play back in final.
4. Clear memory.

Entering Text with Flush Left Format

You have been taught how to enter text using justify or ragged right. In both of these formats, your final playback looks different than your entry copy.

- In justify the spaces are expanded until all the lines end at the line length.
- In ragged right the spaces are expanded until all the lines are close to, but not at the line length.

These two formats are preferred for entering text because the lines can be quickly rearranged after revisions using scan or entry playback.

If your layout requires lines that must be exactly the same as your entry copy, you can enter them using flush left. Flush left lines will not adjust when you scan them. Flush left for text should be used only when your copy will not be revised, and when you want the right margin to be more uneven than ragged right will allow.

The next exercise will compare text entered in flush left and ragged right.

1. Exercise setup:

- Use a yellow font.
- Enter Flush Left, 16 picas.
- Reset.
- Enter a Tab/Index code for single spacing, no tabs.

2. Enter the following line for line.

This course applies the teachings of psychology, human relations and general semantics to the problems of communications. Experiments, case studies and practical exercises will help the students to understand the process, to recognize the barriers to communications, and ways to break through the barriers.

3. Play back in final.

4. Do not clear memory.

5. Continue reading the manual.

To compare flush left with ragged right, change the Format/Line Length code to ragged right and play back the paragraph again.

As a reminder, to change the Format/Line Length code:

- Depress ENTRY and PAGE START.
- Depress CHAR/STOP once to play back the Format/Line Length code.
- Backspace once.
- Enter a new Format/Line Length code.

6. Change the Format/Line Length to Ragged Right, 16 picas.
 7. Play back in final.
 8. Compare your copy with the flush left final copy.
 9. Clear memory.

Corrections to Flush Left Text

If you have to make corrections to flush left text that will cause the line endings to change, follow these steps:

- Line advance and/or play back to the point of change.
- Line delete the rest of the paragraph.
- Retype from the point of change to the end of the paragraph.

If the correction will require retyping a large amount of the paragraph, and if a less ragged margin is acceptable, use these steps:

- Line advance to the line where the change is to be made.
- Change to ragged right with the same line length.
- Play back to the point of change, make the change, and depress LINE once.
- Scan the rest of the paragraph.
 - Remember, you can scan from the beginning of any line in memory.

Art Contours

Art contours can be created by using No-Print and following a drawn contour guide. This section gives procedures for contours on the left, on the right, and on both left and right. When creating art contours you may find it useful to be able to squeeze an extra character on a line, or to force a short line to justify. The procedure for Character Squeezing is on page 197. The procedure for Forced Justification is on page 198.

Contours on the Left

Example:

A manufacturing company incurs costs in accumulating its many productive resources which include money, materials, machinery, and manpower. Of these four M's—all of which are necessary to keep a business operating—money is obviously an initial requirement.

Where does all the money come from which keeps our American business running? There are two sources of corporate funds. They are external and internal.

1. Exercise setup:

- Insert Form F (in the back pocket of this book).
- Use a red font with the leading dial on 13.
- Set the left margin for the beginning of the longest line. (You may have to adjust your paper.)
- Reset.
- On a line above the top of the contour, enter the following:
 - Justify, 18 picas.
 - Tab/Index code for single spacing, no tabs.

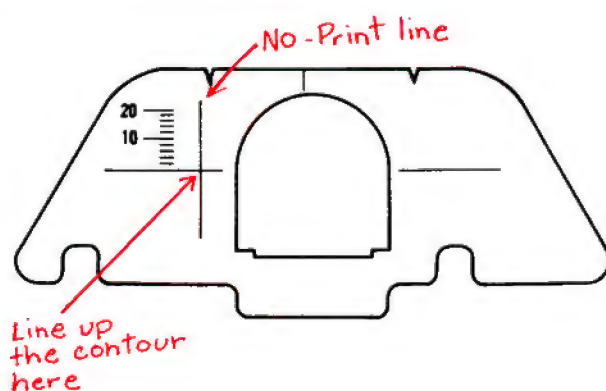
2. Continue reading the manual.

Your copy should look like this:

64



Each line of the contour is entered in No-Print. Remember, in No-Print the carrier moves three picas to the right. Use the No-Print line (the long red line) on the cardholder to check your position.



To enter a left contour:

- Enter No-Print.
 - “No-Print” comes on and the carrier moves.
- If you are not on the contour, enter Space-3 and Space-1 codes until you are on the contour. Do not use backspace codes.
- Enter the first word, a space, and then a Space Position code. Enter a Space Position code after every space between words on the line. After the last word do *not* space or enter a Space Position code.
- Depress tab. The carrier stops at the line length.
- Carrier return. The line prints.
- Carrier return again.

If there is a line in the contour that should not expand to the line length (like the last line of a paragraph) do not tab to the line length. After you type the last word, carrier return.

A manufacturing company incurs costs in accumulating its many productive resources which include money, materials, machinery, and manpower. Of these four M's—all of which are necessary to keep a business operating—money is obviously an initial requirement.

Where does all the money come from which keeps our American business running? There are two sources of corporate funds. They are external and internal.

3. “Click” down with the platen knobs until you are on the first line of the contour.
4. Enter the example.
 - Remember not to tab on the last line of the first paragraph.
 - If you make a mistake, look at the steps below the exercise.
5. Play back in final.
6. Clear memory.

If you make an error in No-Print:

- While typing, backspace or Delete No-Print (code LINE RET).
- After the line has printed, line return, line delete, *roll the platen back the same number of points as shown on the leading dial*, re-enter the line.

Both the space and Space Position code between words are necessary. The Space Position codes are necessary to cause the line to justify. However, in No-Print, the Space Position code does not take up any room on the line. Therefore, the spaces are needed to tell you how close you are to the line length.

Contours on the Right

Example:

The two most commonly used measurement systems in the world are the English, or customary (in which length is measured in inches, feet, yards, etc.) and the metric system (in which length is measured in centimeters, meters, kilometers, etc.).

Whatever the system, it must encompass certain elements and satisfy certain requirements. For every quantity which you wish to measure, you must have a unit (inch, pound, degree, second). You also need a standard for the unit—a yardstick, a one-pound weight.

1. Exercise setup:

- Insert Form G (in the back pocket of this book).
- Use a red font with the leading dial on 13.
- Set the left margin at the left edge of the text.
- Reset.
- On a line above the contour, enter the following:
 - Justify, 18 picas (the Format/Line Length must be at least as long as the longest line in the contour).
 - Tab/Index code for single spacing, no tabs.

2. Continue reading the manual.

To enter a right contour:

- Enter No-Print.
- Enter the text with a space and Space Position code between the words.
 - Watch the No-Print line on the cardholder. When it is near the contour, stop typing. (You may not hear the bell.)
- Enter Space-3 or Space-1 codes to put you exactly on the contour.
- Carrier return to print the line.
- Carrier return again.

If there is a line in the contour that should not expand to the line length (like the last line of a paragraph) do not space out to the contour. After you type the last word, carrier return.

The two most commonly used measurement systems in the world are the English, or customary (in which length is measured in inches, feet, yards, etc.) and the metric system (in which length is measured in centimeters, meters, kilometers, etc.).

Do not space
to the contour
on this line

Whatever the system, it must encompass certain elements and satisfy certain requirements. For every quantity which you wish to measure, you must have a unit (inch, pound, degree, second). You also need a standard for the unit—a yardstick, a one-pound weight.

3. "Click" down with the platen knobs until you are on the first line of the contour.
4. Enter the example.
 - Remember not to space out to the contour on the last line of the first paragraph.
5. Play back in final.
6. Clear memory.

Contours on Both Left and Right

Example:

By his early twenties Leonardo da Vinci had become famous as a painter and a sculptor, an accomplished musician, and as a powerful athlete with extraordinary coordination. During his boyhood in the little hill town of Vinci, where he was born, he had acquired the interest in the natural world that possessed him throughout his life. His love of animals enabled him to ride horses others dared not mount, and led him to buy cages of songbirds in the marketplace so that he could set them free.

1. Exercise setup:

- Insert Form H (in the back pocket of this book).
- Use a red font with the leading dial on 13.
- Set the left margin for the beginning of the longest line in the contour.
- Reset.
- On a line above the contour, enter the following:
 - Justify, 20 picas (the line length must be at least as long as the longest line in the contour).
 - Tab/Index code for single spacing.

2. Continue reading the manual.

Entering the contour:

- Enter No-Print.
- Space in to the contour.
- Enter the text with a space and Space Position code between the words. Do not space or enter a Space Position code after the last word.
- Watch the No-Print line as you approach the right contour. The bell will not ring on the short lines.
- When you are close to the contour, enter Space-3 and Space-1 codes until you are on the contour.
- Carrier return to print the line.
- Carrier return again.

By his early twenties Leonardo da Vinci had become famous as a painter and a sculptor, an accomplished musician, and as a powerful athlete with extraordinary coordination. During his boyhood in the little hill town of Vinci, where he was born, he had acquired the interest in the natural world that possessed him throughout his life. His love of animals enabled him to ride horses others dared not mount, and led him to buy cages of songbirds in the marketplace so that he could set them free.

3. "Click" down with the platen knobs to the first line of the contour.
4. Enter the example.
5. Play back in final.
6. Clear memory.

Character Squeezing

Squeezing characters on a line is useful when:

- The right margin locks when entering text or revising and you have only a punctuation mark or a single character left to enter.
- The last word of a paragraph prints out for a hyphenation decision and all but one or two characters could fit on the line.

To squeeze characters on the line:

- Count the number of spaces between words on the line.
- Find the total unit value of the characters that need to be added to the line. Refer to the Character Unit Values Chart on page 43 in the *IBM Mag Card Composer Reference Book* or check your Graphics Scale.
- If the unit value of the characters does not exceed the number of spaces:
 - a. With ENTRY down, move to the beginning of the line where you want to add the characters.
 - b. Depress WORD.
 - c. Enter a Backspace-1 code.
 - d. Repeat b and c until you have entered the same number of Backspace-1 codes as the number of units to be added.
 - e. Play back to (but not through) the last word on the line.
 - f. Play back the last word using CHAR/STOP.
 - g. Enter or play back the characters that would not fit.
- If the unit value of the characters exceeds the number of spaces, the word or part of the word must be dropped to the next line.

Forced Justification

When the last line of a paragraph ends before the bell rings, the line will not justify. You can force the line to justify by following one of the procedures below.

Justify (“j”) format

- When entering text:
 - Enter the line.
 - Tab to the line length.
 - Carrier return.
- If the text has already been entered:
 - With ENTRY down, play back the line up to the last word on the line.
 - Play back the last word using CHAR/STOP.
 - Enter a tab. (The carrier will stop at the line length.)
 - With ENTRY up, page start and play back in final.

Ragged right (“r”) or flush left (“l”)

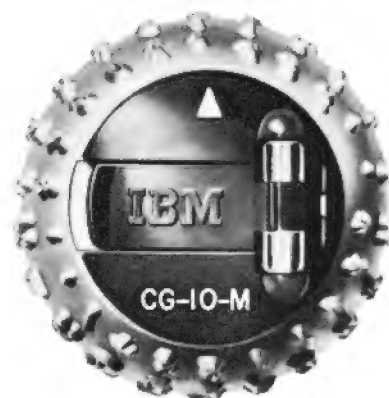
- When entering text:
 - Enter Space Position codes (rather than regular spaces) between all words in the line.
- If the text has already been entered:
 - With ENTRY down, delete the line (use LINE DEL).
 - Reenter the line using Space Position codes (rather than regular spaces) between all words on the line.
 - Carrier return.
 - With ENTRY up, page start and play back in final.

SPECIAL FONTS

This section covers the following special fonts. Read only those pages describing the fonts you have.

	Page
Copperplate Gothic (large capitals, symbols, and rules)	199
Copperplate Gothic Double Case (small capitals in lowercase position)	201
Copperplate Gothic Fraction (small capitals and numbers for constructing fractions)	200
Technical Composition	202–203
Bold/Light	201
Typewriter Characters	204

Copperplate Gothic—Font Code Number 79



Refer to the charts in the *IBM Mag Card Composer Reference Book*, page 50, for capital height, unit values, and impression settings.

In addition to the boxes located in the lowercase “s” and “m” positions, you can make other boxes by combining two symbols.

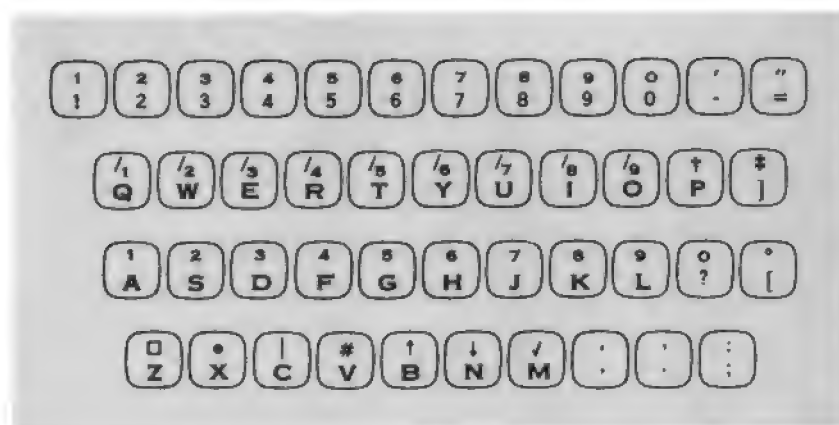
Rectangular box (□)—lowercase “o” and lowercase “p”.

Square box (◻)—lowercase “o”, two Backspace-1 codes, and lowercase “p”.

Box with rounded corners (○)—lowercase “y” and lowercase “u”.

Use of the five horizontal and four vertical rules to construct forms is covered in the “Forms—Ruling” section, page 165.

Copperplate Gothic Fraction—Font Code Number 72

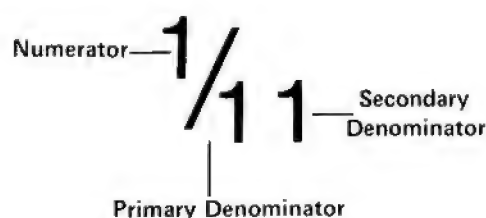


Refer to the charts in the *IBM Mag Card Composer Reference Book*, page 50, for capital height, unit values, and impression settings.

The vertical line in the uppercase “c” position descends one point below the typing line. It can be used to create a cent (¢) or dollar (\$) sign. Type the vertical line, four Backspace-1 codes, and then type the “c” or “s”.

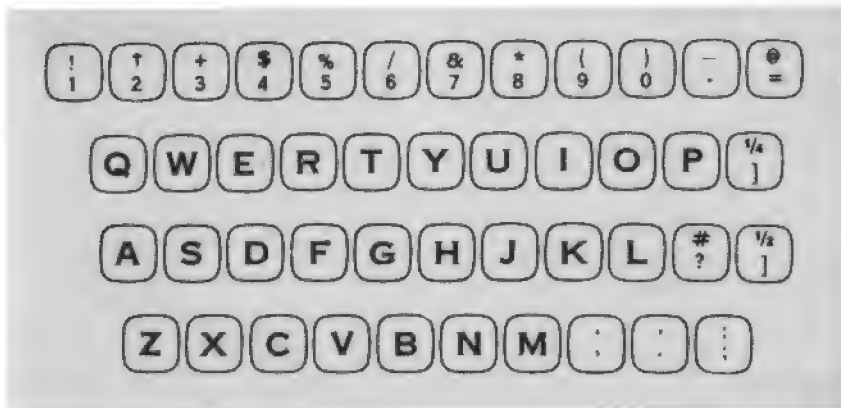
The bullet (solid circle) prints one point above the typing line. The degree sign, foot or minute mark, and inches or seconds mark prints three points above the typing line.

Numerators and denominators are constructed as follows:



- Enter the numerator. The numerators are located in the uppercase positions of the top row of keys. The numerators print three points above the typing line.
- Enter the primary denominator (/1). The slash prints with the number. Primary denominators are located in the uppercase positions of the second row of keys.
- Enter the secondary denominator if needed. Secondary denominators are located in the uppercase positions of the home row.

Copperplate Gothic Double Case—Font Code Number 68



Refer to the charts in the *IBM Mag Card Composer Reference Book*, page 50, for capital height, unit values, and impression settings.

The keyboard for this font is the same as the standard U.S. text keyboard except for the substitution of the “#” sign for “¼”. The lowercase positions are small capitals.

Each number is four units in width instead of the six units on the standard U.S. text fonts.

Bold/Light Fonts—Font Code Number 45

On the Bold/Light fonts, bold numbers replace the symbols on the number row of standard fonts. The rest of the keyboard arrangement is the same as the standard U.S. text fonts.

The fonts are identified with “B/L” in the weight position. They are available in Univers 10- and 11-point medium.

The Bold/Light Font Code Number is 45. The Font Code Number must be entered when using a Bold/Light font to be sure that the bold numbers will be six units in width.

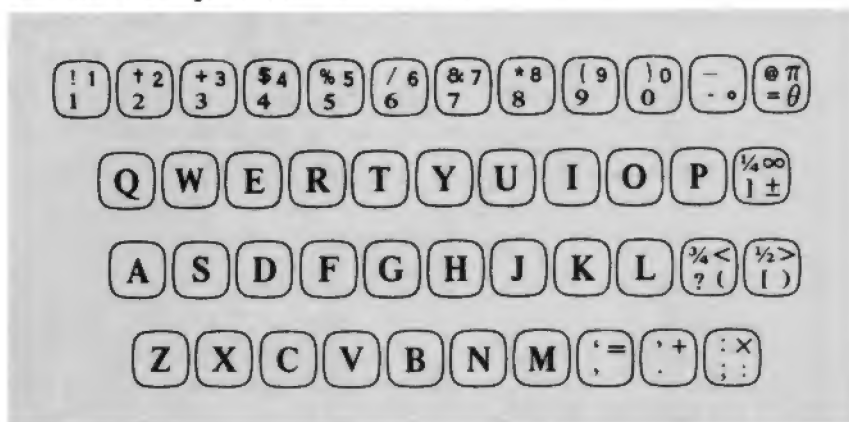
Technical Composition Fonts

The Technical Composition fonts simplify the typing of documents containing superscripts and symbols.

The Technical Composition fonts are identified by a "T" following the weight letter on the top of the font. Fonts available with the technical composition character set are the Press Roman and Univers type styles in 11- and 10-point type sizes.

Alphabetic and numeric characters have the same unit values as those on the standard U.S. text fonts. See the chart on page 51 in the *IBM Mag Card Composer Reference Book* for the unit values of the symbols and superscripts.

Technical Composition—Font Code Number 60



The same character is used for the minus sign, hyphen, and the dash. It is located where the em dash is on the standard U.S. text font.

Superscript numbers, located in the uppercase positions on the top row, print 4 points above the baseline.

Subscripts are made by rolling down the paper and typing the superscript numbers. (Remember to enter Stop codes before and after the subscripts so playback will stop for you to adjust the paper.) To place subscripts just below the baseline, roll down:

8 points for 11-point type
6 points for 10-point type

Because there is no semicolon on this font, you will need to construct it as follows: Type a colon, enter three Backspace-1 codes, and type a comma.

A comma can be used to print an apostrophe. To position the apostrophe, roll the paper back 6 points and type the comma. (Remember to enter the Stop codes.)

Occasionally other characters that normally rest on the typing line are combined with superscripts and subscripts.

The following chart lists the number of points needed to raise the character above the typing line to match a superscript.

LEADING ADJUSTMENT TO MAKE SUPERSCRIPTS OF TECHNICAL COMPOSITION FONT CHARACTERS			
Character	Leading in Points	Character	Leading in Points
.	4	.	4
:	4	=	3
+	4	×	4
—	3	π	4
•	2	θ	4
±	4	∞	3
>X	3	()	3
Alphabetic Characters 4			

The following chart lists the number of points needed to lower the character from the typing line.

LEADING ADJUSTMENT TO MAKE SUBSCRIPTS OF TECHNICAL COMPOSITION FONT CHARACTERS					
Character	Leading in Points		Character	Leading in Points	
	11-Pt. Type	10-Pt. Type		11-Pt. Type	10-Pt. Type
—	5	3	=	5	3
•	8	5	+	5	3
π	4	2	×	4	2
θ	5	2	.	4	2
∞	6	4	:	4	2
±	5	3	:	4	2
◇	4	3	Alphabetic	4	2
()	4	2			

Typewriter Characters—Font Code Number 64



The Typewriter Characters fonts contain characters normally found on a typewriter keyboard. These fonts are identified by “MT” under the weight.

The six shaded keybuttons show the uppercase characters that differ from the standard U.S. text composer keyboard.

The Typewriter Legal Characters fonts contain characters normally found on a legal keyboard. The two differences from the keyboard shown above are:

- The paragraph symbol is in the place of the “at” (@) sign.
- The section symbol is in the place of the cent (¢) sign.

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